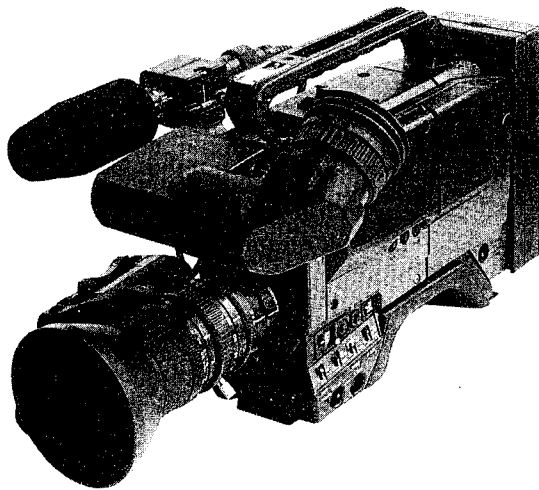


No. 60085

JVC Service Manual



(Lens, viewfinder, microphone and camera adapter are optional)

MODEL KY-19

NOTES

- The KY-19 is a 3-CCD color video camera that the optical system of the KY-27 color video camera is changed. Namely, the KY-27 employs the 2/3" CCD while the KY-19 employs the 1/2" CCD.
Therefore, this service manual only describes the matters that are different from the KY-27.
On servicing, refer to the service manuals (No. 60061 for NTSC and No. 60072 for NTSC/PAL) for the KY-27 together with this.
- The KY-19 is capacitated for incorporating all options for the KY-27 except the camera lens.

TABLE OF CONTENTS

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the  symbol and shaded (■) parts are critical for safety.

Replace only with specified part numbers.

Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.

Caution for continued protection against fire hazard.

Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:

1) Wires covered with PVC tubing

2) Double insulated wires

3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:

1) Insulation Tape

3) Spacers

5) Barrier

2) PVC tubing

4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

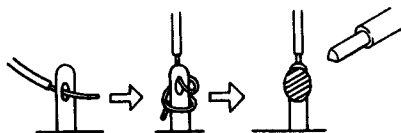


Fig. 1

7. Observe that wires do not contact heat producing parts (heat-sinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

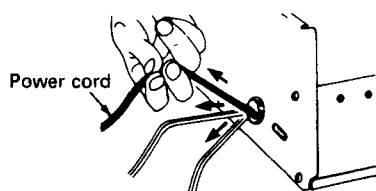


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)

In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector

In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

1) **Connector part number :** E03830-001

2) **Required tool :** Connector crimping tool of the proper type which will not damage insulated parts.

3) **Replacement procedure**

(1) Remove the old connector by cutting the wires at a point close to the connector.

Important : Do not reuse a connector (discard it).

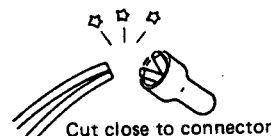


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

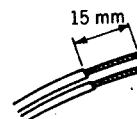


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

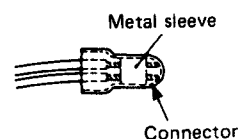


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

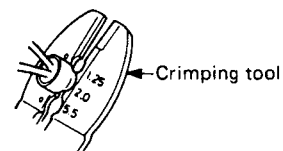


Fig. 6

(5) Check the four points noted in Fig. 7.

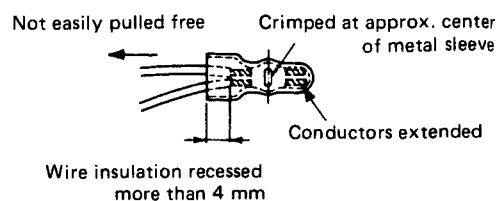


Fig. 7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

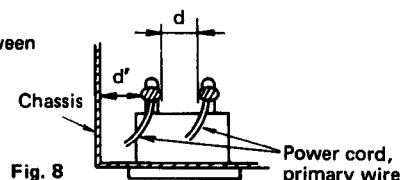
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

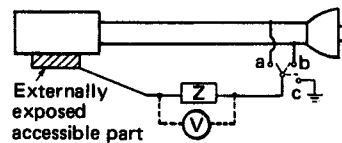


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method: (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

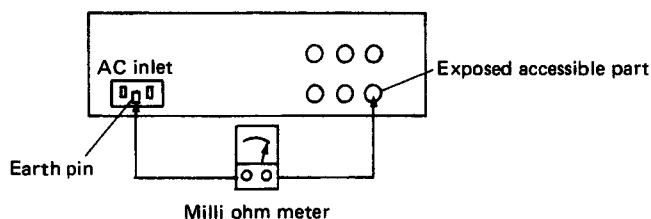


5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega / 500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	—	AC 900 V 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V	Europe & Australia	$R \geq 10 \text{ M}\Omega / 500 \text{ V DC}$	AC 3 kV 1 minute (Class II)	$d \geq 4 \text{ mm}$
200 to 240 V			AC 1.5 kV 1 minute (Class I)	$d' \geq 8 \text{ mm (Power cord)}$ $d' \geq 6 \text{ mm (Primary wire)}$

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	$1 \text{ k}\Omega$	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	$0.15 \mu\text{F}$ and $1.5 \text{ k}\Omega$	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	Europe & Australia	$2 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
220 to 240 V		$50 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

DIFFERENT POINTS BETWEEN KY-19 AND KY-27 IN THEIR INSTRUCTIONS

- Handling and operation methods of the KY-19 are the same as those of the KY-27 except the following points.

1. Standard camera lens

Since the KY-19 employs the 1/2" CCD, the optical system is different from that of the KY-27 that employs the 2/3" CCD. In those circumstances, camera lenses for the 2/3" CCD of the KY-27 cannot be used for the KY-19.

The standard camera lenses and others usable for the KY-19 are as follows.

- S14X7.5B12 : Standard camera lens for the KY-19, for 1/2" CCD, 14X zoom lens (made by Fujinon)
- YH13X7.5K12 : Standard camera lens for the GY-X2, for 1/2" CCD, 13X zoom lens (made by Canon)
- HZ-714 : Standard camera lens for the GY-X1, for 1/2" CCD, 14X zoom lens (made by JVC)
- S16X6.7B12 : for 1/2" CCD, 16X zoom lens (made by Fujinon)
- YH17X7KRS12: for 1/2" CCD, 17X zoom lens (made by Canon)

In addition, the HZ-410 and HZ-416 camera lenses for the KY-15 (1/2" CCD) cannot be used for the KY-19 since their optical characteristics don't match the KY-19.

2. Different matters in the specifications of KY-19 and KY-27

There are the following differences between the KY-19 and KY-27 in their specifications.

	KY-19	KY-27
Image size	1/2 inch	2/3 inch
Number of effective picture elements	NTSC: 768(H) × 494(V) PAL : 752(H) × 582(V)	NTSC: 728(H) × 493(V) PAL : 728(H) × 581(V)
Lens mount	1/2" bayonet	2/3" bayonet
Variable scan	NTSC: 60.1 Hz to 2084.6 Hz (255 steps) PAL: 50.1 Hz to 2067.8 Hz (305 steps)	60.2 Hz to 1966.7 Hz (255 steps) 50.0 Hz to 1953.1 Hz (305 steps)
Color temperature conversion filters	3 positions: ① 3200 K ② 5600 K ③ 5600 K + 1/16 ND	4 positions: ① 3200 K ② 5600 K ③ 5600 K + 1/16 ND ④ Effect (Crosslight)

SECTION 1

DIFFERENCES BETWEEN KY-19 AND KY-27

1.1 DIFFERENCES IN THE SPECIFICATIONS

- Standard camera lens
- Pickup device is different (KY-27: 2/3" CCD, KY-19: 1/2" CCD)
- Special effect (crosslight) filter (in KY-27 only)

For details, see the "DIFFERENT POINTS BETWEEN KY-19 AND KY-27 IN THEIR INSTRUCTIONS" on the preceding page.

1.2 DIFFERENCES IN THE MECHANISM

- Optical block assembly (including optical filter)
- Right side cover (silksprint of "KY-19" emblem)

For details, see the "5. EXPLODED VIEWS AND PARTS LISTS".

1.3 DIFFERENCES IN THE P. C. BOARDS

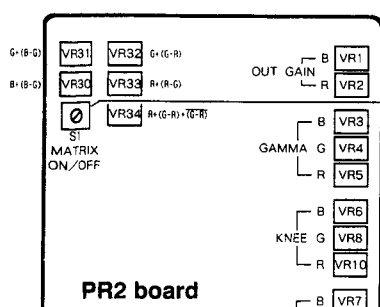
Board Name	Function and Remark	Difference
ISB ISG ISR	Image sensor board Image sensor board Image sensor board	Designed for exclusive use of the KY-19. These are not interchangeable with the KY-27's boards of the same names.
DR1 DR2	CCD driver CCD driver	
PA	Pre Amplifier	
PR1	Video processing	
CP1	CPU board	Board pattern is the same as that of the KY-27, but it differs from the KY-27's in the program ROM (IC2). (See Note.)



Note: The board assemblies other than the above ones are used in the KY-19 and KY-27 in common with the exception that some of those used in early products of the KY-27 are not interchangeable.

SECTION 2

SERVICE CAUTIONS AND DISASSEMBLY

- Notes:**
- For disassembling methods and P. C. board arrangements of the KY-19, refer to the service manuals (No. 60061 and 60072) for the KY-27 since the two models are the same in those points.
 - In regard of the internal switch on the PR2 board, the KY-19 has the switch layout different from the KY-19 as shown below.



Symbol No.	Switch Name	Initial Setting at shipment
S1 (PR2 board)	MATRIX switch	NTSC  ON
		PAL  OFF

To turn on/off the color matrix function.



ON : Activates color matrix masking.

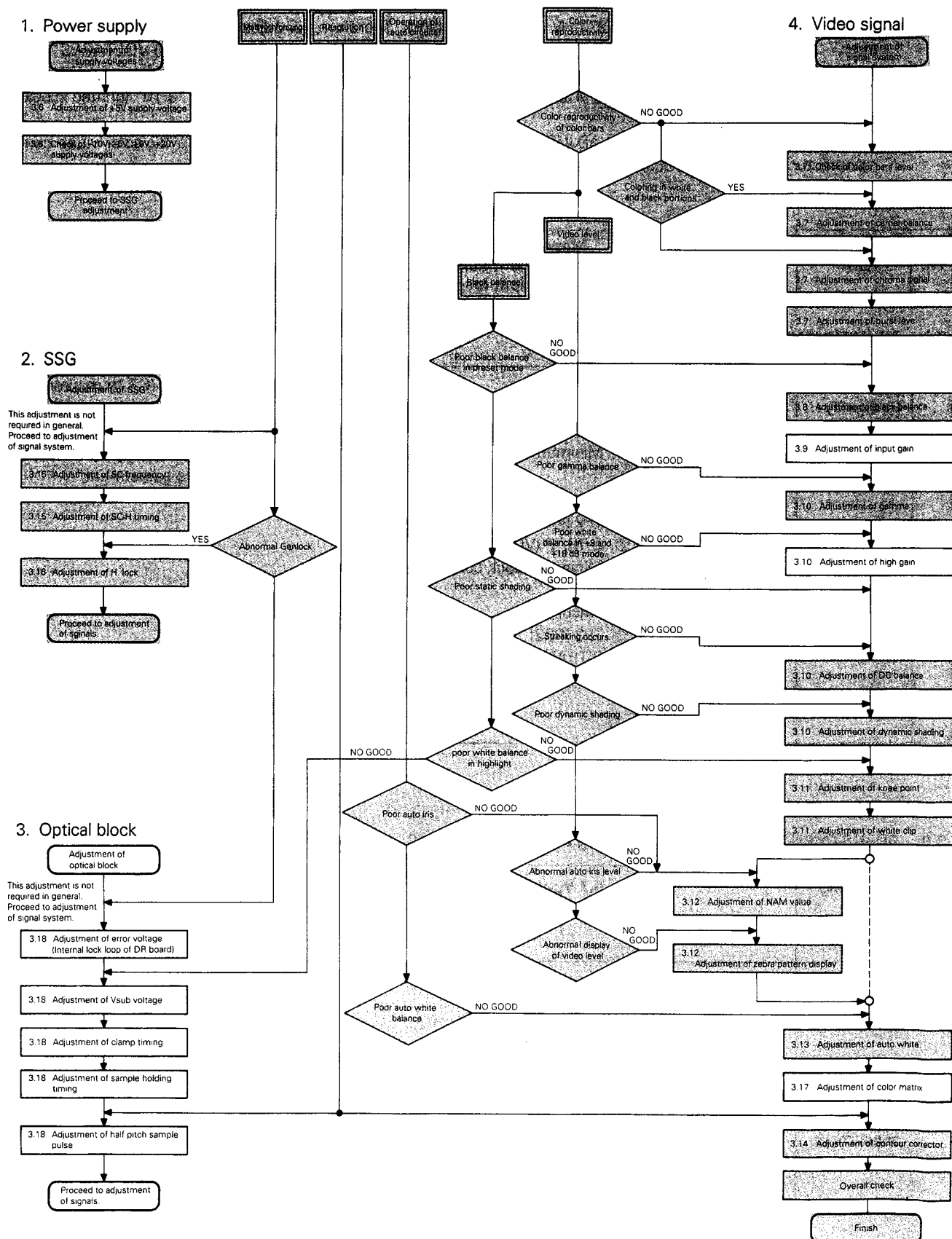


OFF: Inactivates color matrix masking.

ADJUSTMENT PROCEDURE

Note: • Since adjustment methods of the items in the gray box () are the same as for the KY-27, refer to the service manuals (No. 60061 and No. 60072) for the KY-27 for those adjustments.

3.1 FLOWCHART OF ELECTRICAL ADJUSTMENTS



3.2 REQUIRED EQUIPMENT AND STANDARD SETUP FOR ELECTRICAL ADJUSTMENT

3.2.1 Necessary instruments (the same for the KY-27 except the camera lens as specified below)

9. Camera lens : S14X 7.5B12 or YH13X 7.5K12

Notes: • The KY-19 is different from the KY-27 only in the optical block. Therefore, for adjustments of the items described in the KY-27's service manual as the subsections "3.6 ADJUSTMENTS OF POWER SUPPLY (PS) VOLTAGES" through "3.16 ADJUSTMENT OF SSG (Adjustment of externally synchronizing mode)", refer to the service manuals No. 60061 and No. 60072 for the KY-27 with careful attention to the different setting levels in "3.9" and "3.10" (printed in boldface in the following).

- The following method of the "3.17 ADJUSTMENT OF COLOR MATRIX" applies to the KY-27 color video cameras manufactured in and after October 1993 (serial number is 1585□□□□), too.

No.	Item	Measuring instruments & Input signals	Measuring point (◎) Adjustment parts (①) Adjustment level (☆)	Adjustment procedure
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3.8 ADJUSTMENT OF BLACK BALANCE

1-1	Trap frequency adjustment	<ul style="list-style-type: none"> • Oscilloscope (H-rate, 10 : 1) • Lens: Capped 	<ul style="list-style-type: none"> • B channel ◎ TP1 [PR2] ① B-TRAP (VC5) [PR1] ☆ Minimum clock components • G channel ◎ TP2 [PR2] ① G-TRAP (VC6) [PR1] ☆ Minimum clock components • R channel ◎ TP3 [PR2] ① R-TRAP (VC7) [PR1] ☆ Minimum clock components 	<p>1) Adjust VC5, VC6 and VC7 to minimize clock components in the blanking portion of respective waveforms of B, G and R channels.</p> <p>Note: This adjustment should precede "G channel black balance adjustment".</p>
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3.9 ADJUSTMENT OF INPUT GAIN (Setting of input signal level)

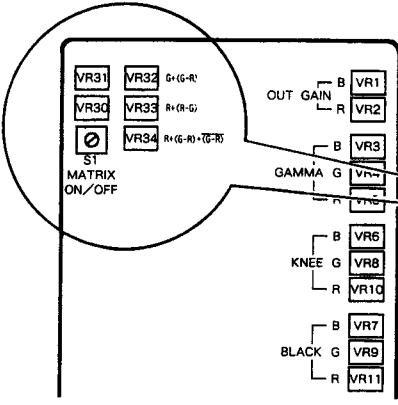
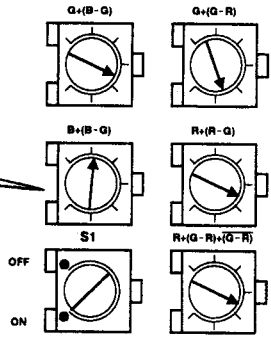
2	Iris setting		☆ 0.7 Vp-p ←	
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3.10 ADJUSTMENT OF VIDEO LEVEL

3	High gain adjustment		☆ 0.23 Vp-p ←	
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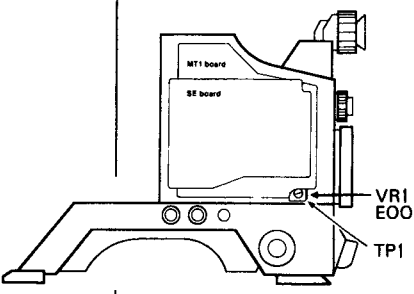
No.	Item	Measuring instruments & Input signals	Measuring point (◎) Adjustment parts (①) Adjustment level (☆)	Adjustment procedure
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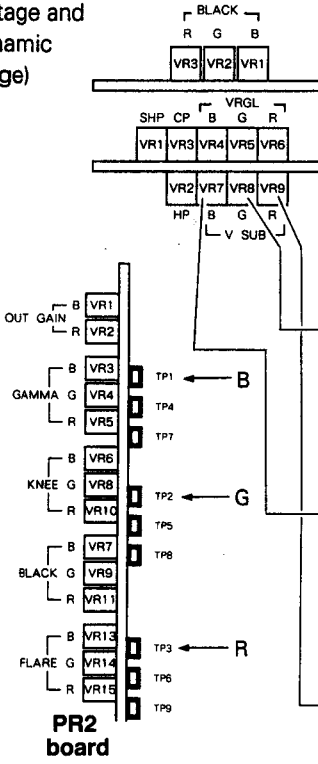
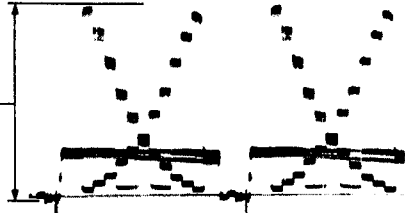
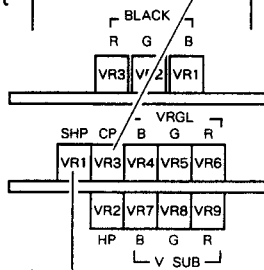
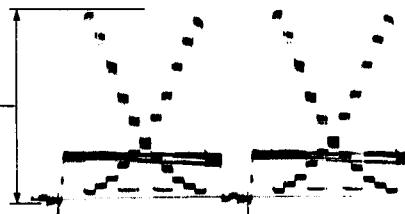
3.17 ADJUSTMENT OF COLOR MATRIX

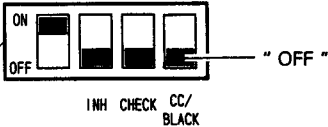
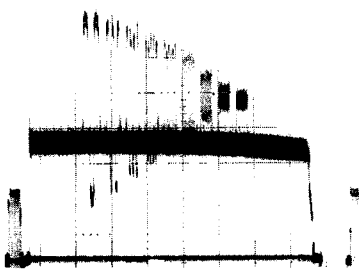
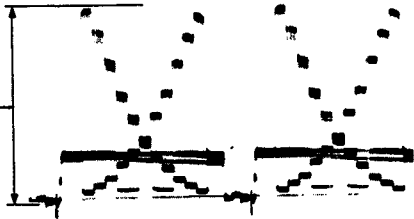
1	Matrix adjustment		<p>① B + (B - G) (VR30) [PR2] ① G + (B - G) (VR31) [PR2] ① G + (G - R) (VR32) [PR2] ① R + (R - G) (VR33) [PR2] ① R + (G - R) + (G - R) (VR34) [PR2]</p>  <p>PR2 board</p>	<p>1) As the standard, set respective VRs as shown below.</p> 
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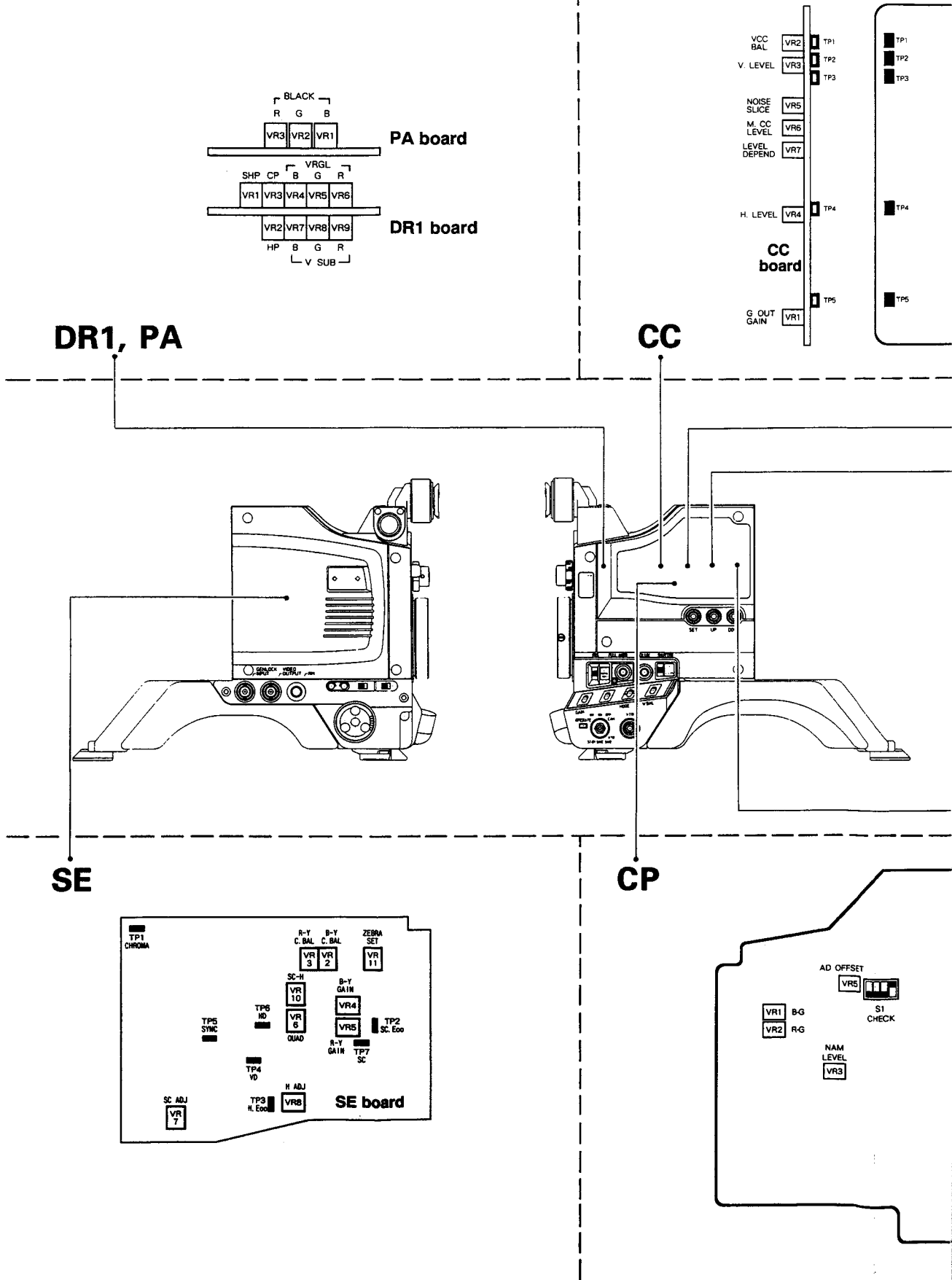
3.18 ADJUSTMENT OF CCD DRIVER AND TIMING GENERATOR

Note: • This adjustment is required after the optical block assembly is replaced.

1	Preparation			1) Confirm that all settings of the camera are in the normal conditions (see page 3-3).
2	Error voltage adjustment (Internal lock loop of timing generator)	• Digital voltmeter	<p>◎ TP1 [DR1] ① Eoo (VR1) [DR2] ☆ +2.5 V DC</p> 	1) Adjust the voltage as specified.

No.	Item	Measuring instruments & Input signals	Measuring point (◎) Adjustment parts (①) Adjustment level (☆)	Adjustment procedure				
3	Vsub voltage adjustment (relating to blooming suppression voltage and dynamic range)	<ul style="list-style-type: none">Gray scale chart ↓ Just scanOscilloscope (H-rate, 10 : 1) 	<ul style="list-style-type: none">◎ G. V SUB (VR8) [DR1]☆ Full counterclockwise position (↺)◎ TP2 [PR1]① Lens iris☆ <table border="1" data-bbox="564 499 786 580"><tr><td>NTSC</td><td>2.1 Vp-p</td></tr><tr><td>PAL</td><td>1.8 Vp-p</td></tr></table>	NTSC	2.1 Vp-p	PAL	1.8 Vp-p	<p>1) Turn the VR full counterclockwise (↺) to eliminate blooming suppression voltage.</p> <p>2) Adjust the white peak of the gray scale chart to have the specified level.</p>  <p>3) Adjust the G. V SUB VR to the position just before the white level of the gray scale chart is clipped.</p> <p>4) Adjust the VRs for B and R channels to the position just before the white level of the gray scale chart is clipped at the specified level.</p>
NTSC	2.1 Vp-p							
PAL	1.8 Vp-p							
4	Clamp timing adjustment		<ul style="list-style-type: none">① CP (VR3) [DR1]☆ Mechanical center position	<p>1) Set the CP VR to the mechanical center position.</p>				
5	Sample holding timing adjustment (Correlative double sampling timing)	<ul style="list-style-type: none">Gray scale chart ↓ Just scanOscilloscope (H-rate, 10 : 1)	<ul style="list-style-type: none">◎ TP2 [DR1]① SHP (VR1) [DR1]☆ Maximum video level	<p>3) Maximize the white peak of the gray scale chart with the SHP VR.</p> 				

No.	Item	Measuring instruments & Input signals	Measuring point (◎) Adjustment parts (①) Adjustment level (☆)	Adjustment procedure
6	Half pitch sampling timing adjustment	<ul style="list-style-type: none"> In-megacycle chart ↓ Just scan Oscilloscope (H-rate, 10 : 1) 	◎ VIDEO OUTPUT (with 75 Ω terminator) ① HP (VR2) [DR1] ☆ Highest sensitivity	<ul style="list-style-type: none"> Set the lens iris to "A" (auto) position. Set the CONTOUR ON/OFF switch on the CP1 board to "OFF".  <p>1) Shoot the in-megacycle chart.</p> <p>2) Observe the frequency response while adjusting the waveform so that its high frequency level becomes maximum.</p>  <p>3) Return the CONTOUR ON/OFF switch to "ON" position.</p>
7	Reset gate clock voltage adjustment	<ul style="list-style-type: none"> Gray scale chart ↓ Just scan Oscilloscope (H-rate, 10 : 1) 	<ul style="list-style-type: none"> B channel <ul style="list-style-type: none"> ◎ TP1 [PR1] ① B. VRGL (VR4) [DR1] ☆ Maximum white peak level G channel <ul style="list-style-type: none"> ◎ TP2 [PR1] ① G. VRGL (VR5) [DR1] ☆ Maximum white peak level R channel <ul style="list-style-type: none"> ◎ TP3 [PR1] ① R. VRGL (VR6) [DR1] ☆ Maximum white peak level 	<p>1) Maximize the white peak of the gray scale chart with the VRs for respective channels.</p> 



cedure

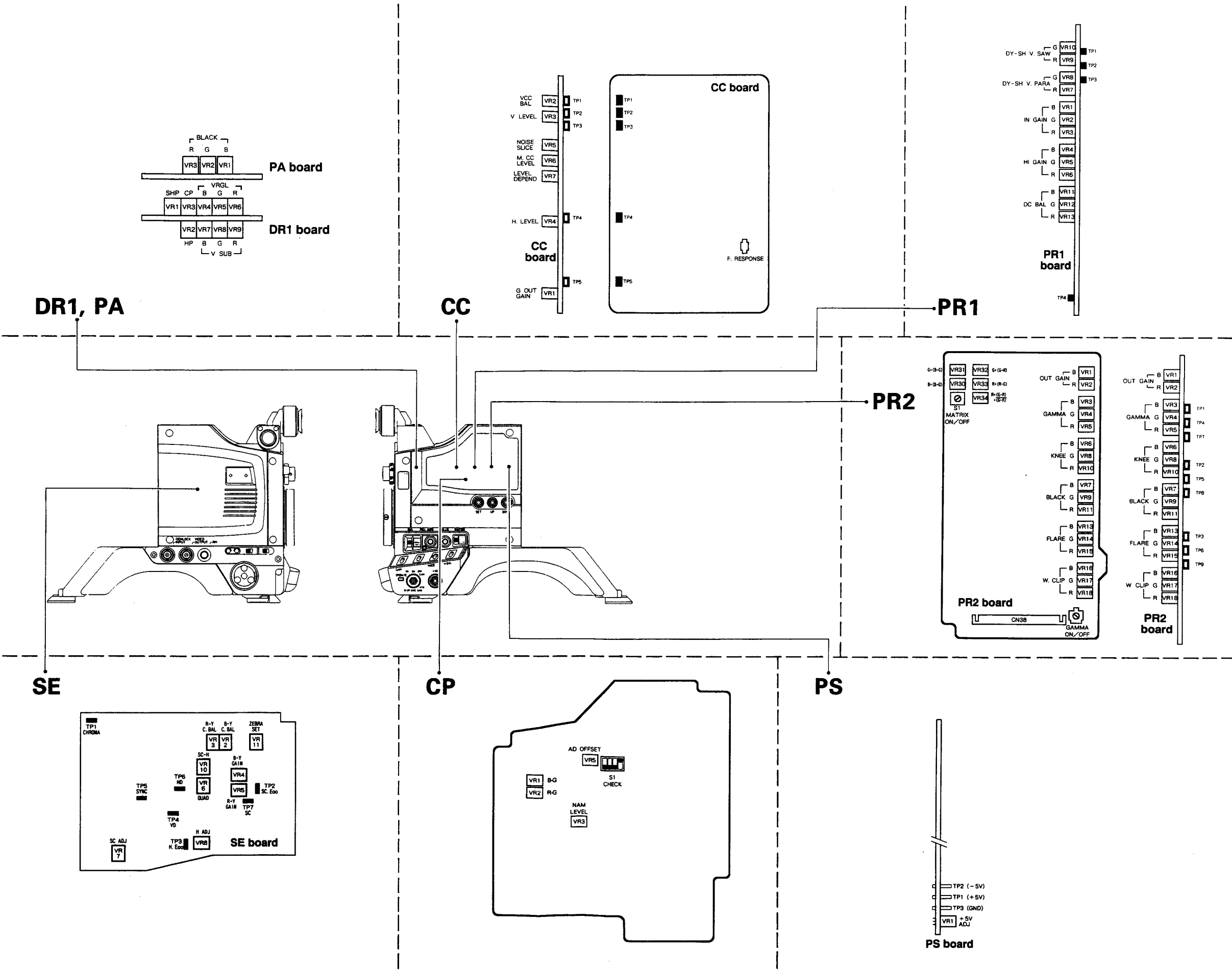
position.
switch on the CP1

" OFF "

irt.
onse while adjust-
ts high frequency

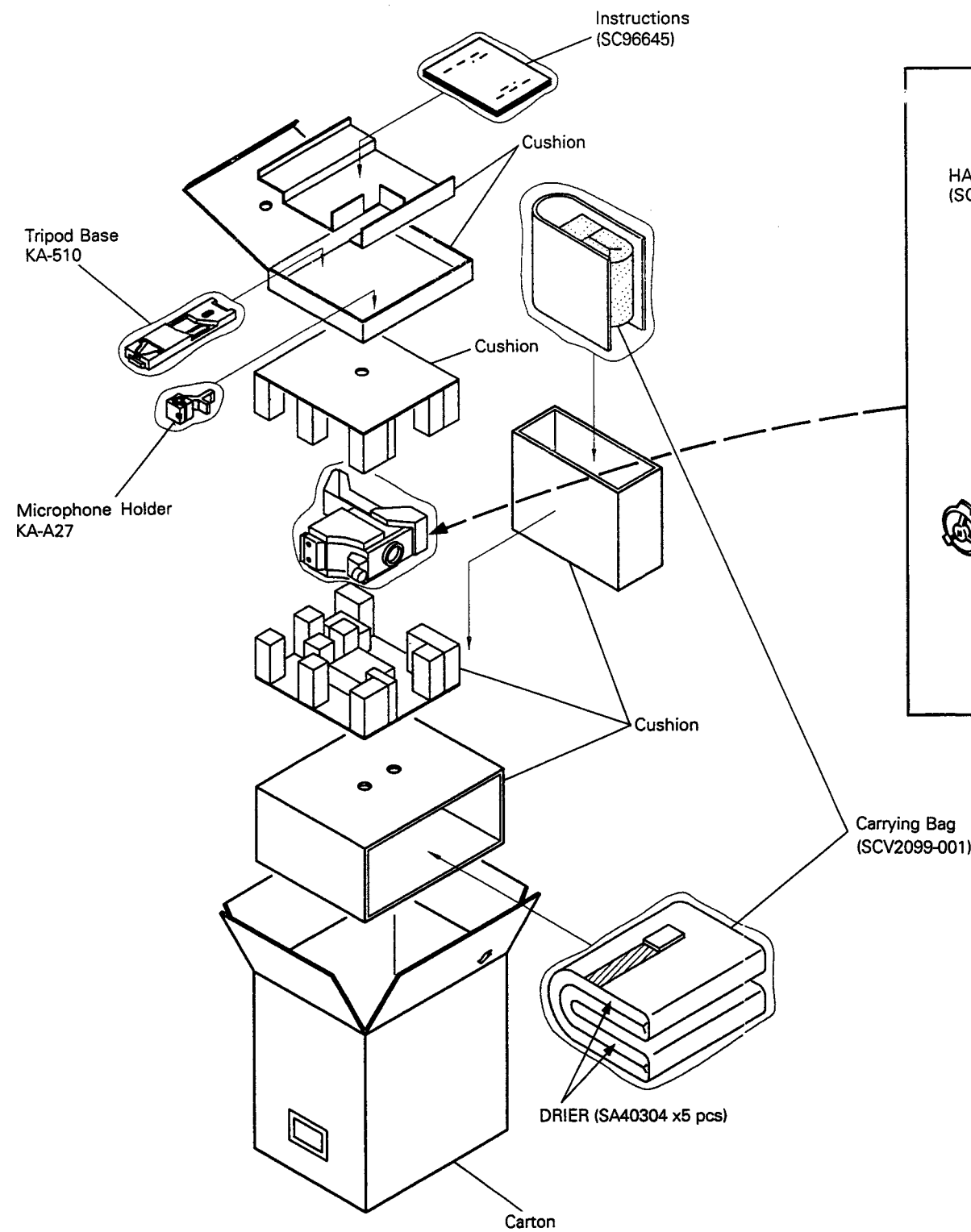
OFF switch to "ON"

of the gray scale
active channels.



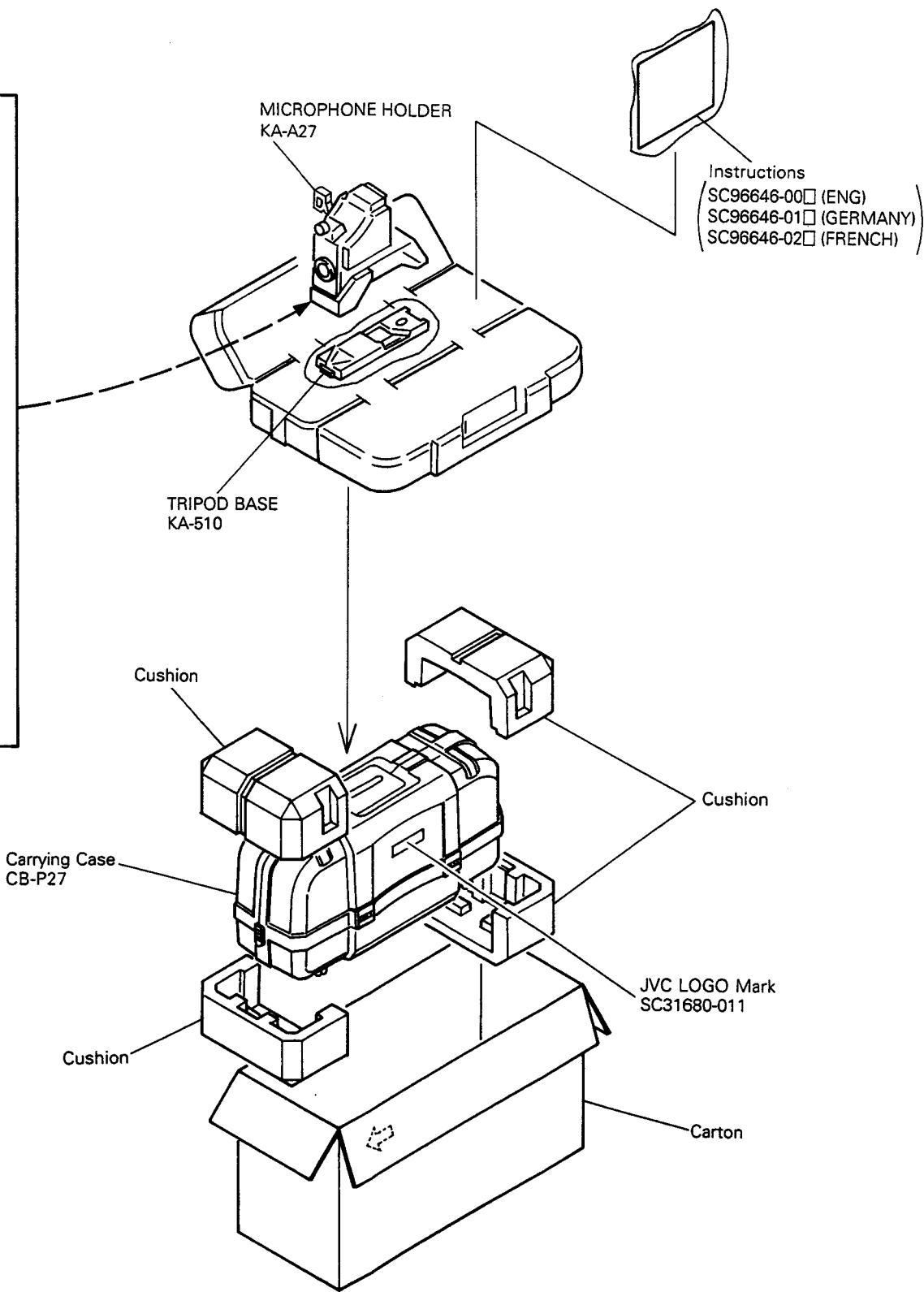
SECTION 4
REPACKING

• CAMERA HEAD REPACKING (FOR U VERSION)



NOTE: ACCESSORIES ARE SUBJECT TO CHANGE DEPEND ON SALES VERSIONS.

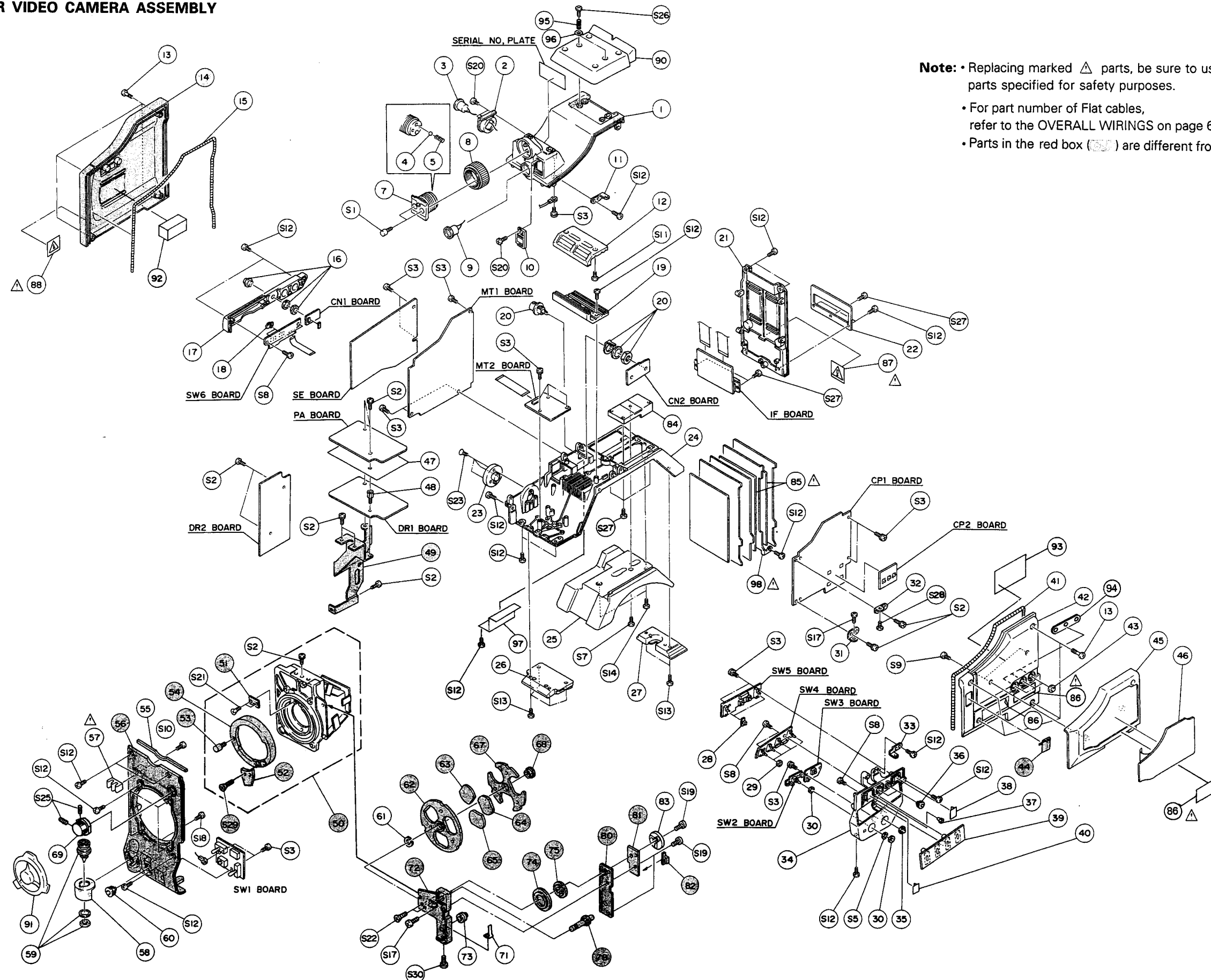
• CAMERA HEAD REPACKING (FOR E VERSION)



NOTE: ACCESSORIES ARE SUBJECT TO CHANGE DEPEND ON SALES VERSIONS.

SECTION 5 EXPLODED VIEWS AND PARTS LIST

5.1 COLOR VIDEO CAMERA ASSEMBLY



- Note:**
- Replacing marked Δ parts, be sure to use parts specified for safety purposes.
 - For part number of Flat cables, refer to the OVERALL WIRINGS on page 6-25.
 - Parts in the red box () are different from the KY-27.

● Camera head assembly parts list **M1**

M1MM□□□□

Symbol No.	Part No.	Part Name	Description
1	SC10150-001	TOP FRAME	
2	SC31490-001	MIC CAP	
3	SCV0238-06S	CONNECTOR	
4	SC40465-045	STEEL BALL	
5	SC45107-001	SPRING	
6	—	—	
7	SC31489-002	VF BASE	
8	SC45127-002	VF RING	
9	SCV0238-06S	CONNECTOR	
10	SC45128-001	FRONT COVER	
11	SC45120-011	B.BRACKET(2)	CP1 BOARD
12	SC31487-001	TOP RAIL	FOR SIDE COVER
13	SC43397-008	SCREW	
14	SC10154-021	SIDE COVER(L)	
15	SC44847-365	SHIELD TUBE	
16	SCV1517-001	CONNECTOR	RM CONNENCTOR
17	SC20474-002	CN COVER	MIC RET SW
18	SC44556-002	KNOB	
19	SC31488-001	BOTTOM RAIL	GENLOCK INPUT, VIDEO OUT
20	SCV0749-001	BNC RECEPTACLE	
21	SC10149-001	REAR FRAME(V)	
22	SC45125-001	CN.PLATE	
23	SC40928-001	LOCK GEAR	
24	SC10146-002	BOTTOM FRAME	
25	SC10155-001	SHOULDER PAD	
26	SC20479-002K	FRONT BASE	IRIS SHUTTER for OPERATE SW OPERATE SW
27	SC31335-011	REAR BASE	
28	SC43403-001	KNOB	
29	SC45264-001	RUBBER	
30		refer to the SW2 board assembly	
31	SC45119-001	B.BRACKET(1)	CP1
32	SC45119-011	B.BRACKET(3)	CP1
33	SC45120-001	B.BRACKET(2)	CP1
34	SC20472-002	OPERATE COVER	VTR
35	SC44828-002	SWITCH CAP	
36	SC44828-011	KNOB	LOLUX, FULL AUTO FULL AUTO ON OFF V.SCAN
37	SC43451-001	LED LENS	
38	SC45131-001	STICKER	
39	SC31491-002	SWITCH PANEL	
40	SC45131-011	STICKER	OVER NORM UNDER
△ 41	SC44847-365	SHIELD TUBE	SET UP DOWN FILTER
42	SC10153-002	SIDE COVER(R)	
43	SC44828-011	SWITCH CAP	
44	SC45131-001	STICKER	
45	SC20475-001	CHEEK PAD	
△ 46	SC45145-001	PAD SHEET	for DR BOARD FOR DR1, DR2, PA BOARD FOR U VERSION
47	SC44826-003	SHIELD PLATE	
48	SC44959-021	STUD	
49	SC31773-001	BRACKET	
50	SCM0806-N0A	OPTICAL BLOCK ASS'Y	
	SCM0806-P0A	OPTICAL BLOCK ASS'Y	FOR E VERSION
51	SC44628-011	LENS PLATE	
52	SC43855-001	SCREW	
53	SC40779-001	MOUNT SCREW	
54	SC31305-003	MOUNT RING	

Symbol No.	Part No.	Part Name	Description
55 56 △ 57 58 59	SC44847-050 SC10171-001 SC42550-011 SC44538-001 SCV1938-12S	SHIELD TUBE FRONT FRAME CABLE CLAMPER LENS CAP RECEPTACLE	
60 61 62 63 64	SC44828-011 Q03093-841 SC44488-001 SC43840-001 SC43841-001	KNOB WASHER F. SHEET FILTER FILTER	VTR 3200K 5600K
65 67 68 69 71	SC43842-003 SC31301-001 SC45539-001 SC31323-003 SC44627-001	FILTER FILTER WHEEL SHAFT FILTER KNOB FILTER SPRING	5600K + 6.3%ND
72 73 74 75 76	SC31307-001 SC44482-002 SC44485-001 SC44491-001 SC43397-008	FILTER BASE FILTER STOPPER FILTER.I.GEAR FILTER.I.SHAFT SCREW	
78 80 81 82 83	SC44486-001 SC31306-002 SC84505-002 SSV1766-006 SC44676-005	FILTER SHAFT FILTER COVER FP BOARD CONNECTOR FILTER CAP ASSY	
△ 84 △ 85 △ 86 △ 86 △ 87	SC31482-001 SC41702-011 SC43658-001 PU54392-1 SC41957-012	VTR BASE(V) SHEET CAUTION LABEL CAUTION LABEL CAUTION LABEL	FOR ㊟ FOR U VERSION FOR E VERSION
△ 88 △ 89 90 91 92	SC43948-001 QZL1001-006 SC20473-002 SC43825-002 SC45273-001	CAUTION LABEL CAUTION LABEL HANDLE BASE LENS CAP CUSHION	UL LABEL
93 94 95 96 97	SC45270-002 SC43650-011 SC45195-001 Q03093-817 SC45276-001	LABEL SHEET SPRING WASHER COVER	VR LOCATION
△ 98 S2 S3 S5 S7	SC45121-001 LPSP3004Z LPSP3006Z Q03091-202 SC43390-002	SHIELD PLATE SCREW SCREW WASHER SCREW	PS BOARDS1 BYS4025MBOLTM4×25 M3×4 M3×6
S8 S9 S10 S11 S12	SDSF2606M SDSF3008M SDSP2006M SDSP3005M SDSP3006M	SCREW SCREW SCREW SCREW SCREW	M2.6×6 M3×6 M2×6 M3×5 M3×6
S13 S14 S17 S18 S19	SDSP3010M SDSP4008M SPSK2030M SPSK2040M SPSK2050M	SCREW SCREW SCREW SCREW SCREW	M3×10 M4×8 M2×3.0 M2×4.0 M2×5.0

Symbol No.	Part No.	Part Name	Description
S20	SPSK2640M	SCREW	M2.6 × 4.0
S21	SSSK2030M	SCREW	M2 × 3.0
S22	SSSK2050M	SCREW	M2 × 5.0
S23	SSSP3006M	SCREW	M3 × 6
S25	YRS2603M	SCREW	M3 × 4
S26	SC43390-003	SCREW	
S27	SDSP2606M	SCREW	M2.6 × 6
S28	SPSK2060M	SCREW	M2 × 6
S29	SSSP2604M	SCREW	M2.6 × 4
S30	SPSK2025M	SCREW	M2 × 2.5

SECTION 6 CHARTS AND DIAGRAMS

■ SCHEMATIC DIAGRAM NOTES

● Schematic safety precaution

 Parts are safety related parts.

When replacing them, be sure to use the specified parts.

Voltage and waveform measurements.

Voltage: Measured with digital voltmeter in DC range; iris closed.

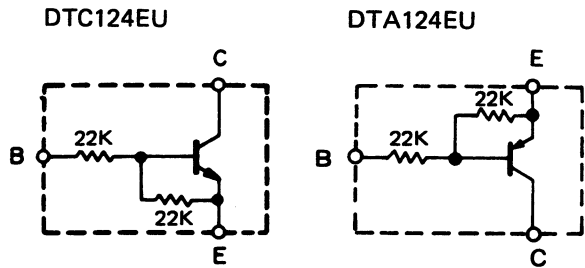
Waveform: Grey scale illuminated at more than 4000 lux at 3200 K lighting.

● Terminal logic

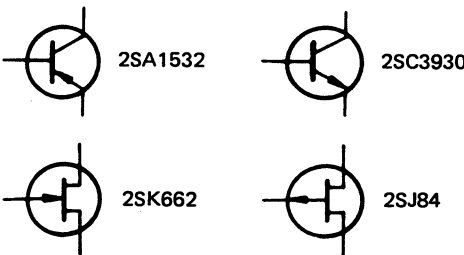
Top bar of terminal name show input or output logic.

Top bar shows, the control circuit become active at negative (low) logic input for example.

● Digital transistors



● Unless otherwise specified transistors and F.E.T.s are:



● Definition of the (A) and the (B) or circuit boards diagrams

(A) : Side on which discrete parts are assembled

(B) : Side on which only chip parts are assembled.

■ REPLACING SUBMINIATURE "CHIP" PARTS

● Some resistors, shorting jumpers (0 Ω resistance), ceramic capacitors, transistors, and diodes are chip parts. These chip parts cannot be reused after they are once removed.

● Chip resistors used in some circuits are of high precision type having little error in resistance. To demonstrate the full capacity of this camera head, place an order for proper parts referring to the diagrams and parts lists in the sections 7.

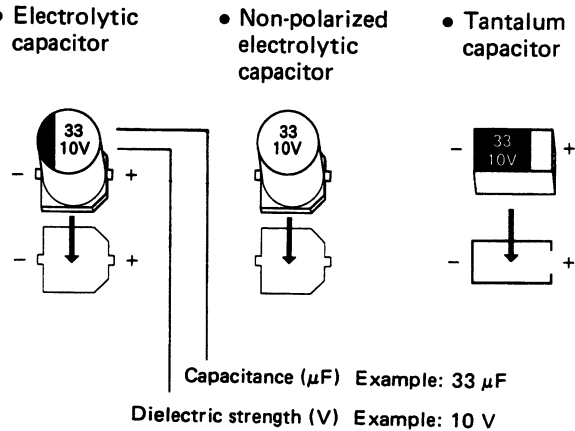
● Soldering cautions:

- 1) Do not apply heat for more than 3 seconds.
- 2) Avoid using a rubbing stroke when soldering.
- 3) Discard removed chips; do not reuse them.
- 4) Supplementary cementing is not required.
- 5) Use care not to scratch or otherwise damage the chips.

● Resistors and capacitors are not interchangeable with chip parts which are used in the color video cameras BY-110, KY-210, etc., because of difference in size. In case of order for parts, refer to the section 7 "ELECTRICAL PARTS LIST".

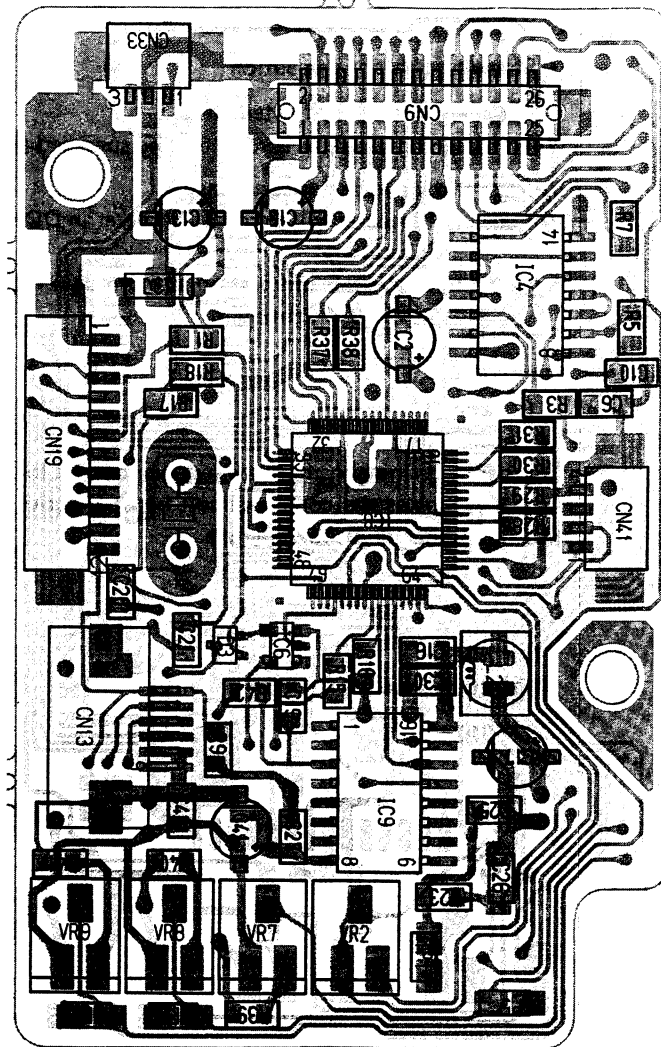
● Polarities of chip electrolytic capacitors and chip tantalum capacitors used in this model are as illustrated below.

Polarities indicated by silk-screen printing on P.C. boards are also shown below. When replacing such parts, make sure of polarities.

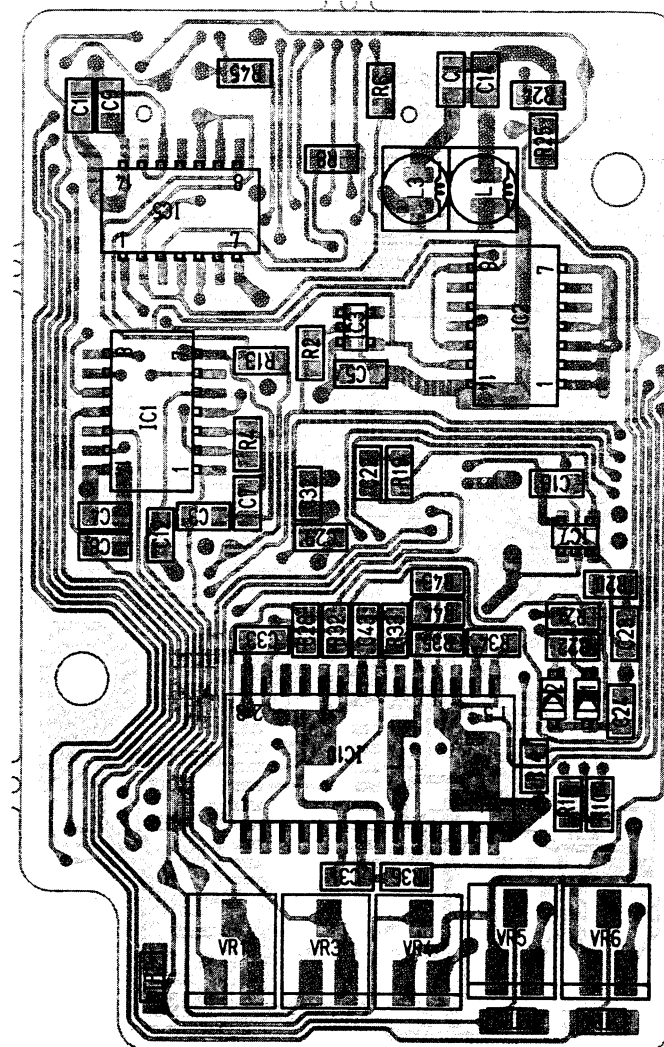


6.1 DR1 CIRCUIT BOARD

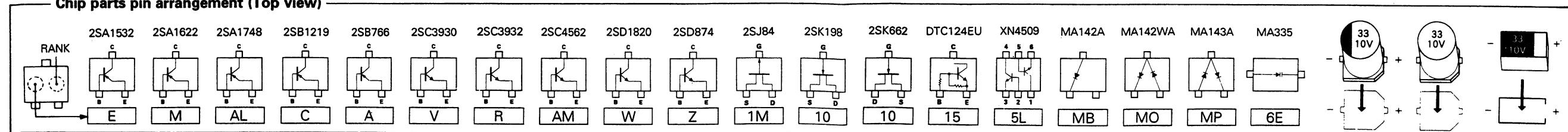
— Side (A) —



— Side (B) —

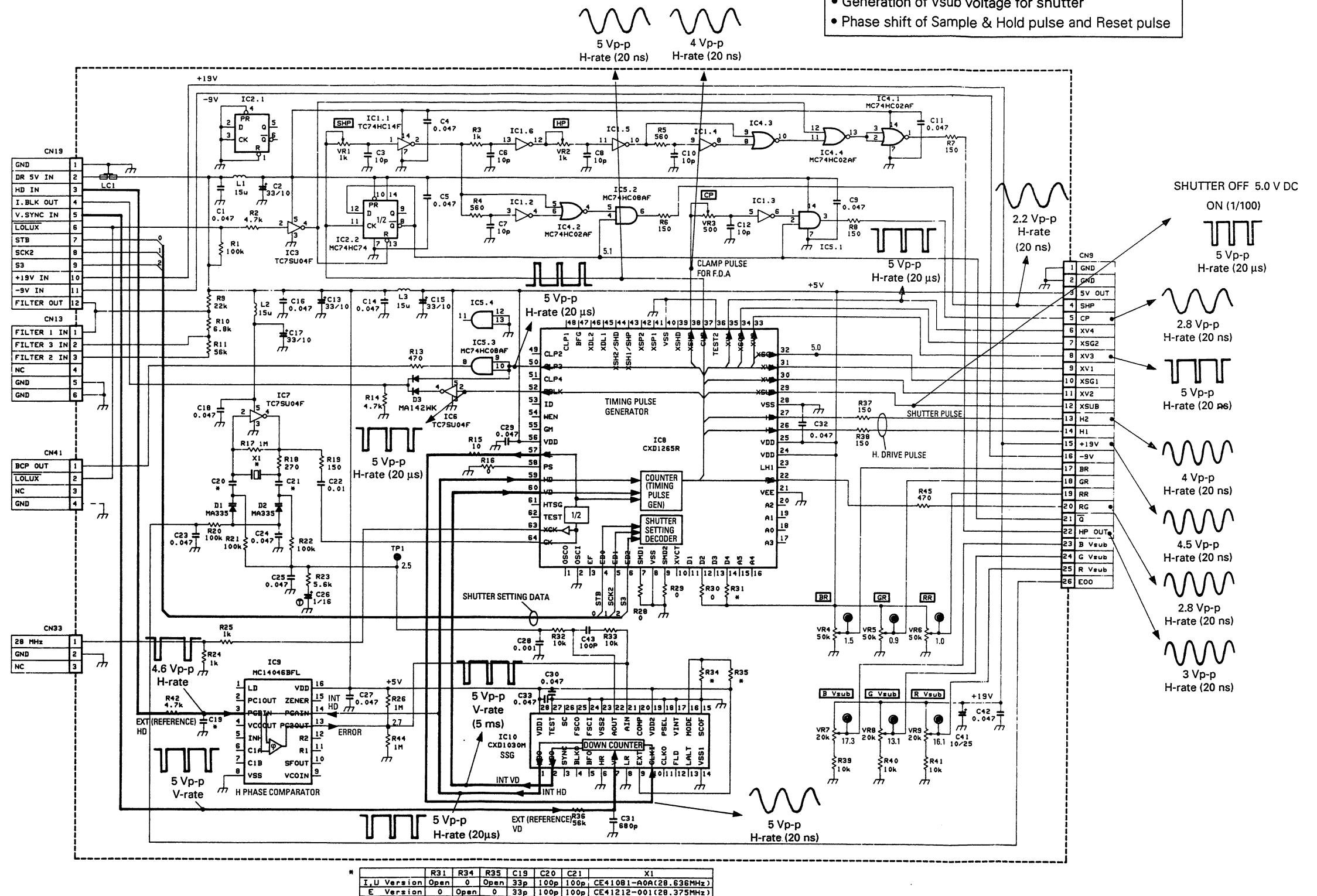


Chip parts pin arrangement (Top view)



6.2 DR1 SCHEMATIC DIAGRAM 05 (CCD Driver No.1 circuit)

- Generation of Vsub voltage
- Generation of Vsub voltage for shutter
- Phase shift of Sample & Hold pulse and Reset pulse

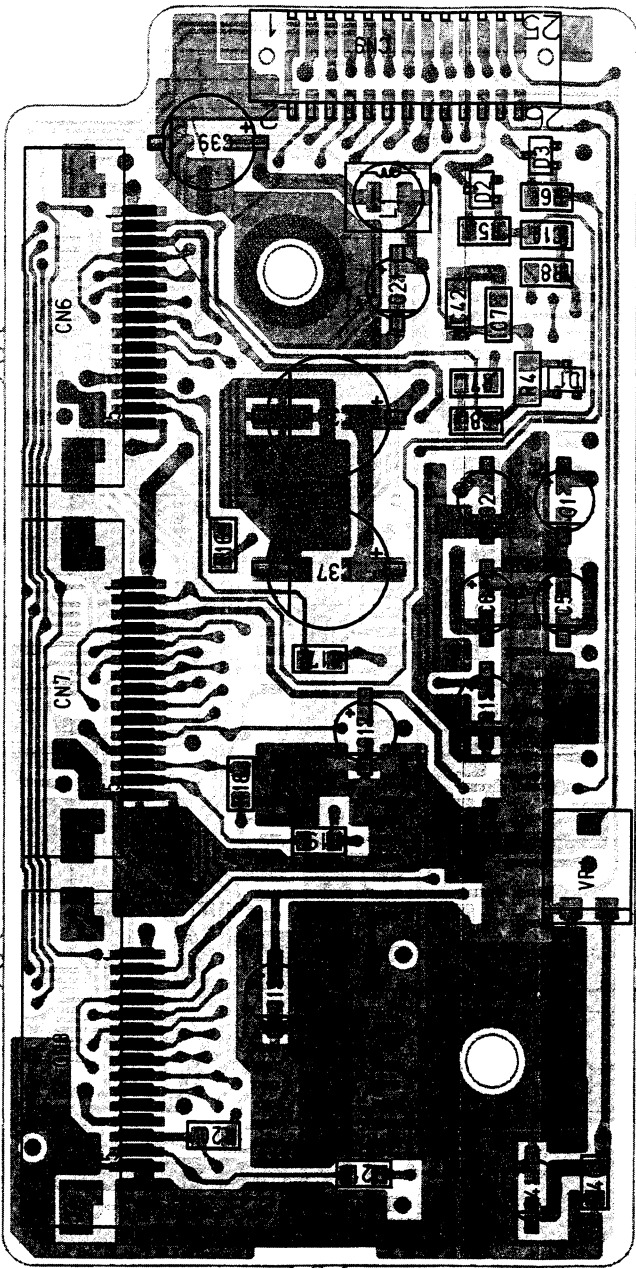


6.3 DR2 CIRCUIT BOARD

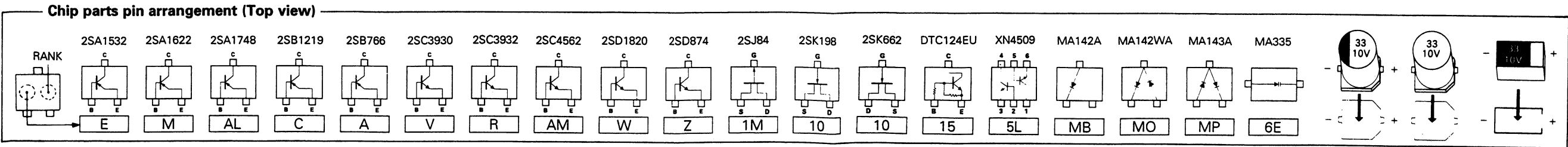
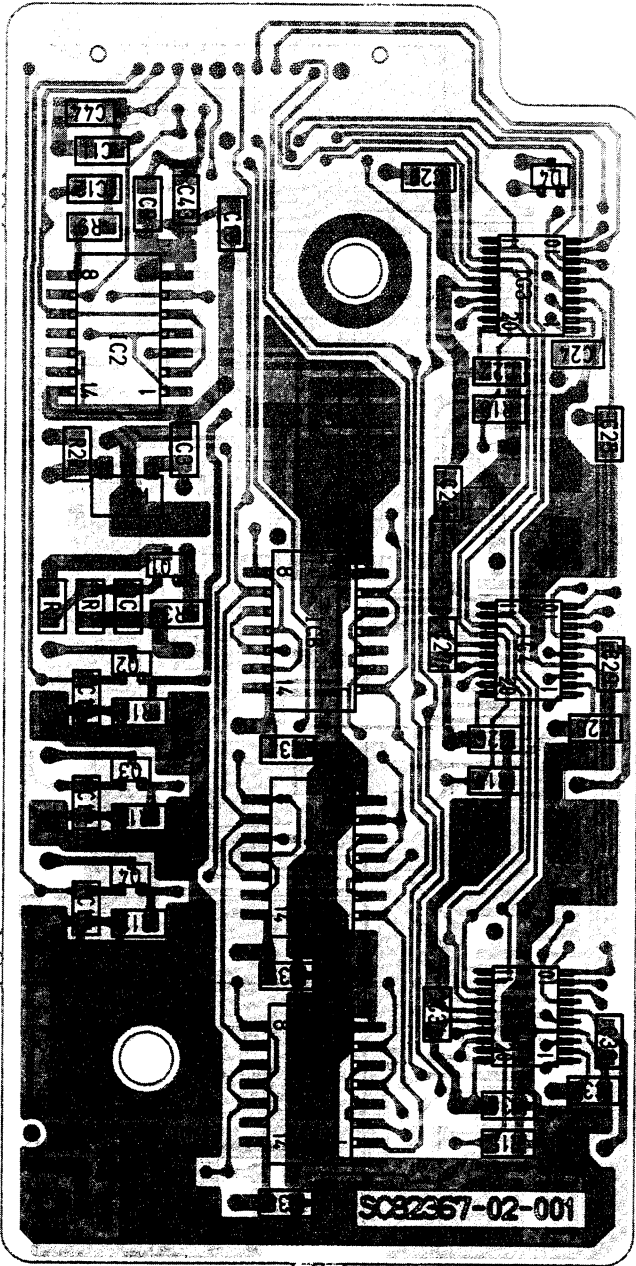
DR1

DR2

— Side (A) —

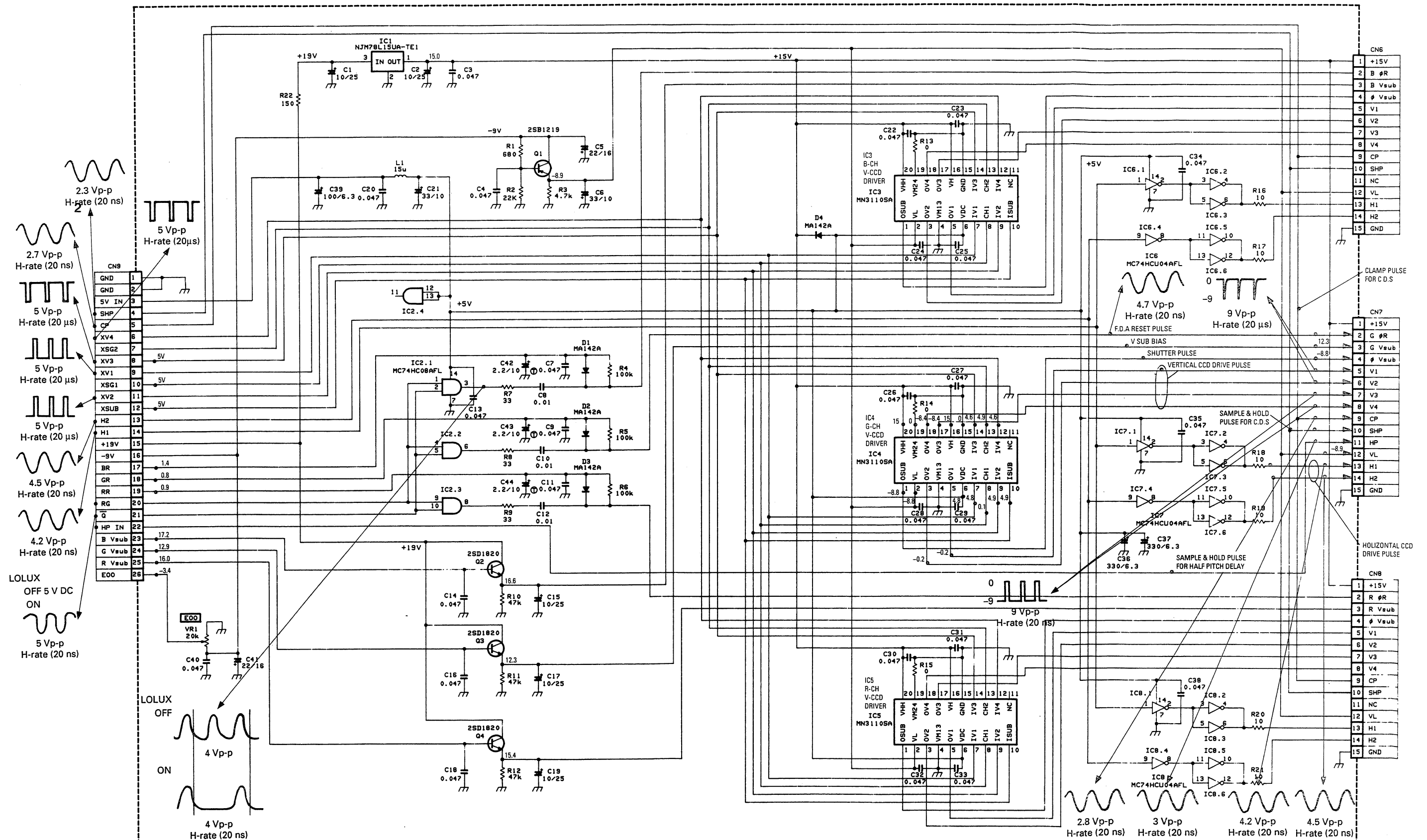


— Side (B) —



6.4 DR2 SCHEMATIC DIAGRAM 06 (CCD Driver No.2 circuit)

Main function of DR2 board:
• Generation of CCD drive pulse



6.5 ISB/ISG/ISR CIRCUIT BOARDS

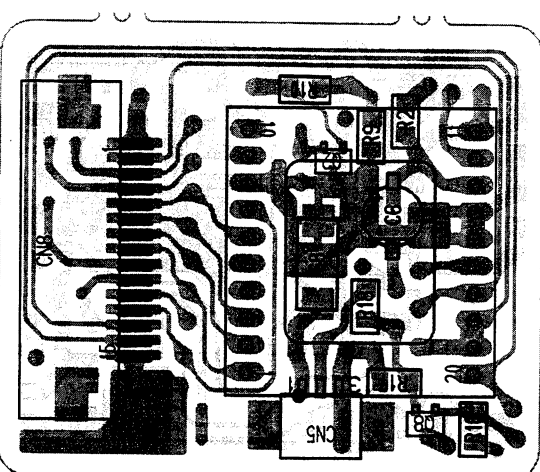
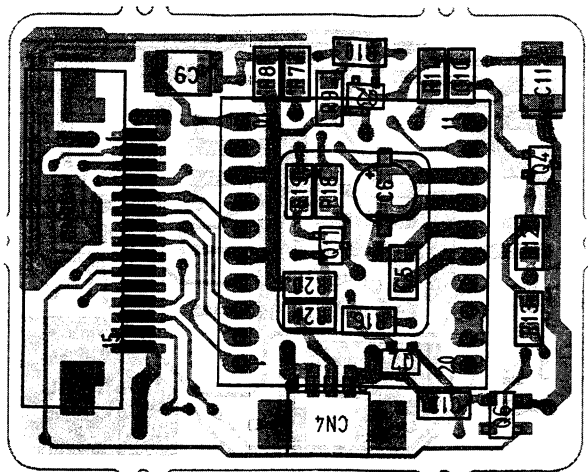
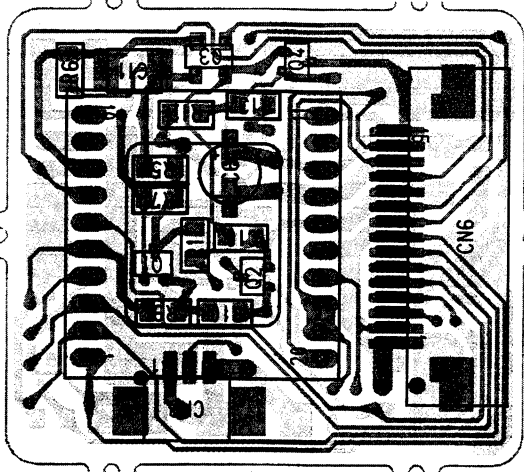
DR2	IS
-----	----

• ISB board

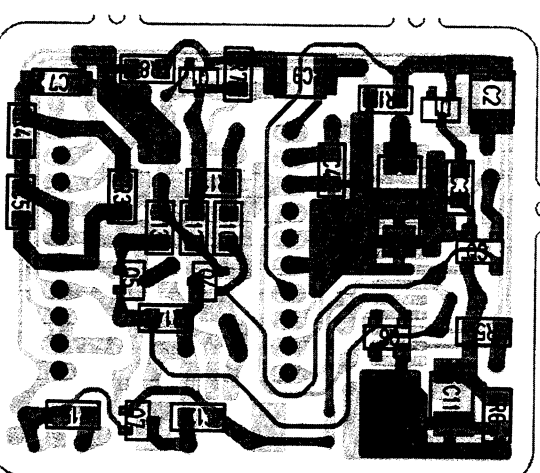
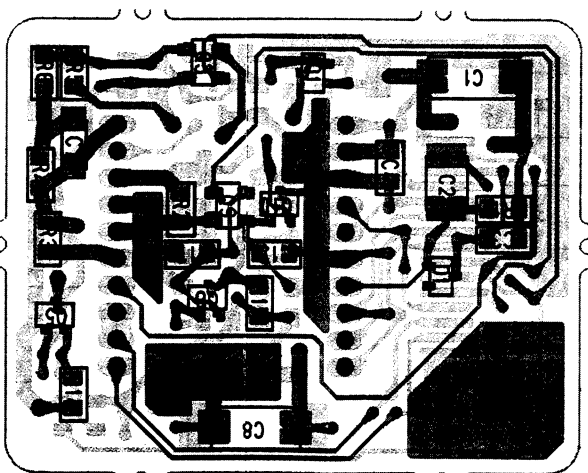
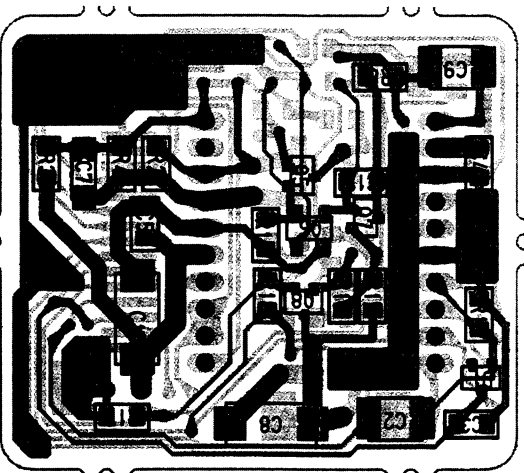
• ISG board

• ISR board

— Side (A) —

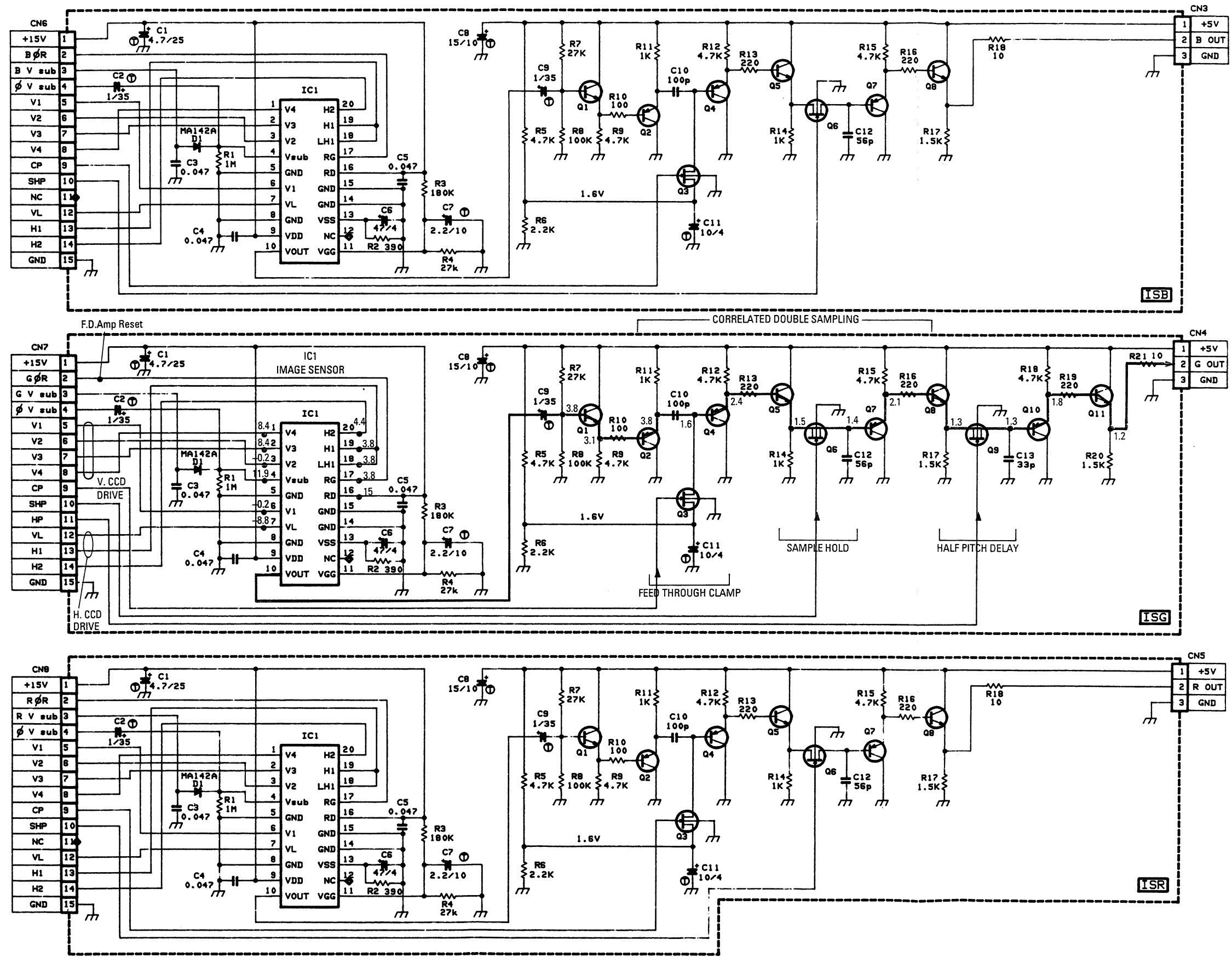


— Side (B) —



6.6 ISB/ISG/ISR SCHEMATIC DIAGRAMS 01 / 02 / 03
(Image Sensor board)

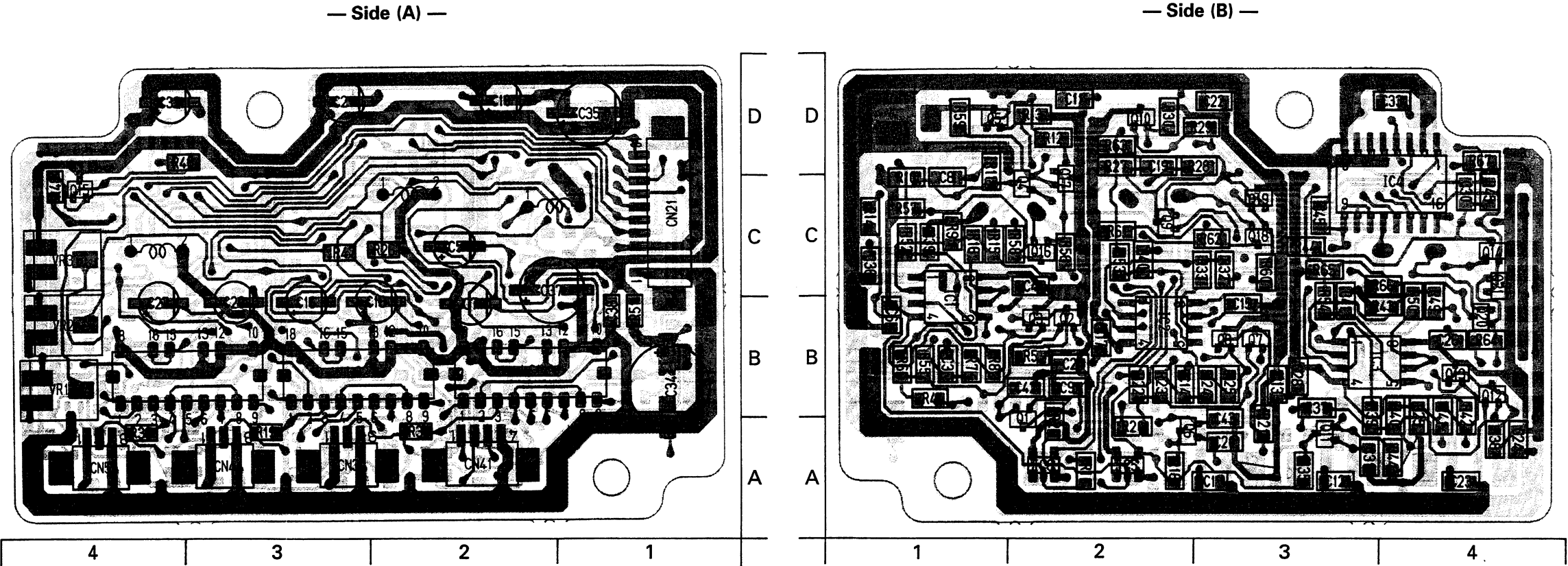
Main function of IS board:
• CCD drive
• Correlative double sampling



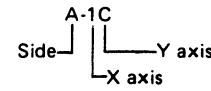
6.7 PA CIRCUIT BOARD

IS

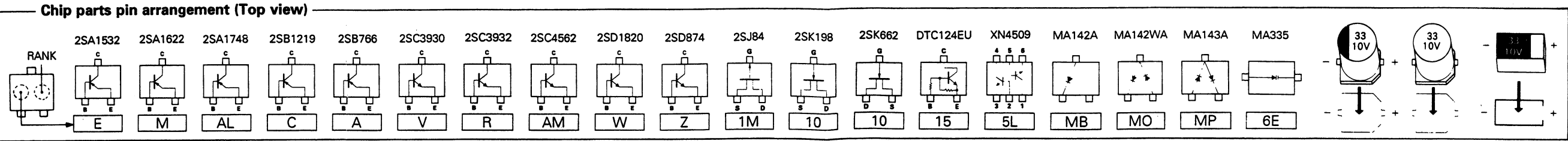
PA



• ADDRESS TABLE OF BOARD PARTS
Each address may have an address error by one interval.



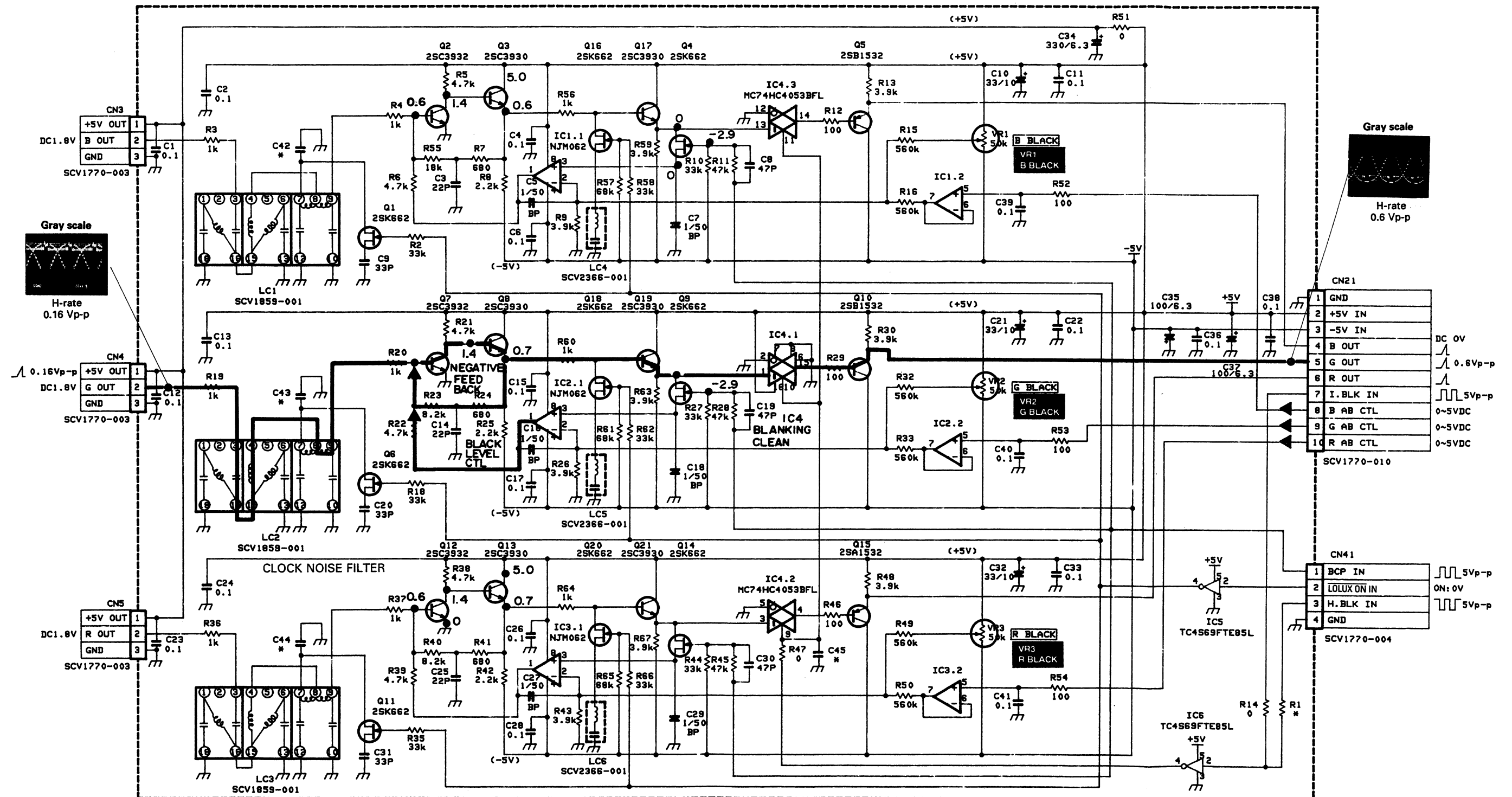
IC1	B- 1C	Q19	B- 3C	R23	B- 2B	R50	B- 4B	C3	B- 1B	C28	B- 3B	LC1	A- 2B
IC2	B- 2B	Q20	B- 4B	R24	B- 3B	R51	A- 1B	C4	B- 2C	C29	A- 3B	LC2	A- 3B
IC3	B- 4B	Q21	B- 4C	R25	B- 3B	R52	B- 1C	C5	A- 2C	C30	B- 4C	LC3	A- 4B
IC4	B- 4C			R26	A- 2C	R53	B- 2C	C6	B- 1B	C31	B- 4A	LC4	A- 2C
IC5	B- 2A	R1	B- 2A	R27	B- 2D	R54	B- 3B	C7	A- 2B	C32	A- 4D	LC5	A- 2C
IC6	B- 2A	R2	B- 2A	R28	B- 3D	R55	B- 1B	C8	B- 1D	C33	B- 4D	LC6	A- 4C
		R3	A- 2A	R29	B- 3D	R56	B- 2C	C9	B- 2B	C34	A- 1B		
Q1	B- 2A	R4	B- 1B	R30	B- 2D	R57	B- 1C	C10	A- 2D	C35	A- 1D		
Q2	B- 2B	R5	B- 2B	R32	B- 3C	R58	B- 2C	C11	B- 2D	C36	B- 1C		
Q3	B- 2B	R6	B- 1B	R33	B- 3C	R59	B- 1D	C12	B- 3A	C37	A- 2C		
Q4	B- 2C	R7	B- 1B	R35	B- 3A	R60	B- 3C	C13	B- 3B	C38	A- 1B		
Q5	B- 1D	R8	B- 1B	R36	A- 4A	R61	B- 2C	C14	B- 2B	C39	B- 1C		
Q6	B- 3A	R9	B- 1C	R37	B- 3A	R62	B- 3C	C15	B- 3B	C40	B- 2C		
Q7	B- 3B	R10	B- 1D	R38	B- 4A	R63	B- 2D	C16	A- 3B	C41	B- 3B		
Q8	B- 3B	R11	B- 1D	R39	B- 4A	R64	B- 4B	C17	B- 2B	C42	B- 2B		
Q9	B- 2C	R12	B- 2D	R40	B- 4A	R65	B- 3C	C18	A- 2B	C43	B- 3A		
Q10	B- 2D	R13	B- 2D	R41	B- 4A	R66	B- 4C	C19	B- 2D	C44	B- 4A		
Q11	B- 3A	R14	B- 1C	R42	B- 4A	R67	B- 4D	C20	B- 3A	C45	B- 3C		
Q12	B- 4B	R15	B- 1C	R43	B- 4B			C21	A- 3D				
Q13	B- 4B	R16	B- 1C	R44	B- 3C	VR1	A- 4B	C22	B- 3D	CN3	A- 3A		
Q14	B- 4C	R18	B- 2A	R45	B- 4C	VR2	A- 4B	C23	B- 4A	CN4	A- 3A		
Q15	A- 4C	R19	A- 3A	R46	A- 4D	VR3	A- 4C	C24	B- 4A	CN5	A- 4A		
Q16	B- 2C	R20	B- 2A	R47	A- 3C			C25	B- 4A	CN21	A- 1C		
Q17	B- 2D	R21	B- 3A	R48	A- 4C	C1	B- 3A	C26	B- 4B	CN41	A- 2A		
Q18	B- 3C	R22	B- 2B	R49	B- 4B	C2	B- 2B	C27	A- 4B				



6.8 PA SCHEMATIC DIAGRAM 04

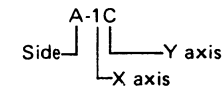
(Pre Amplifier board)

- Preamp.
- Black balance adjustment

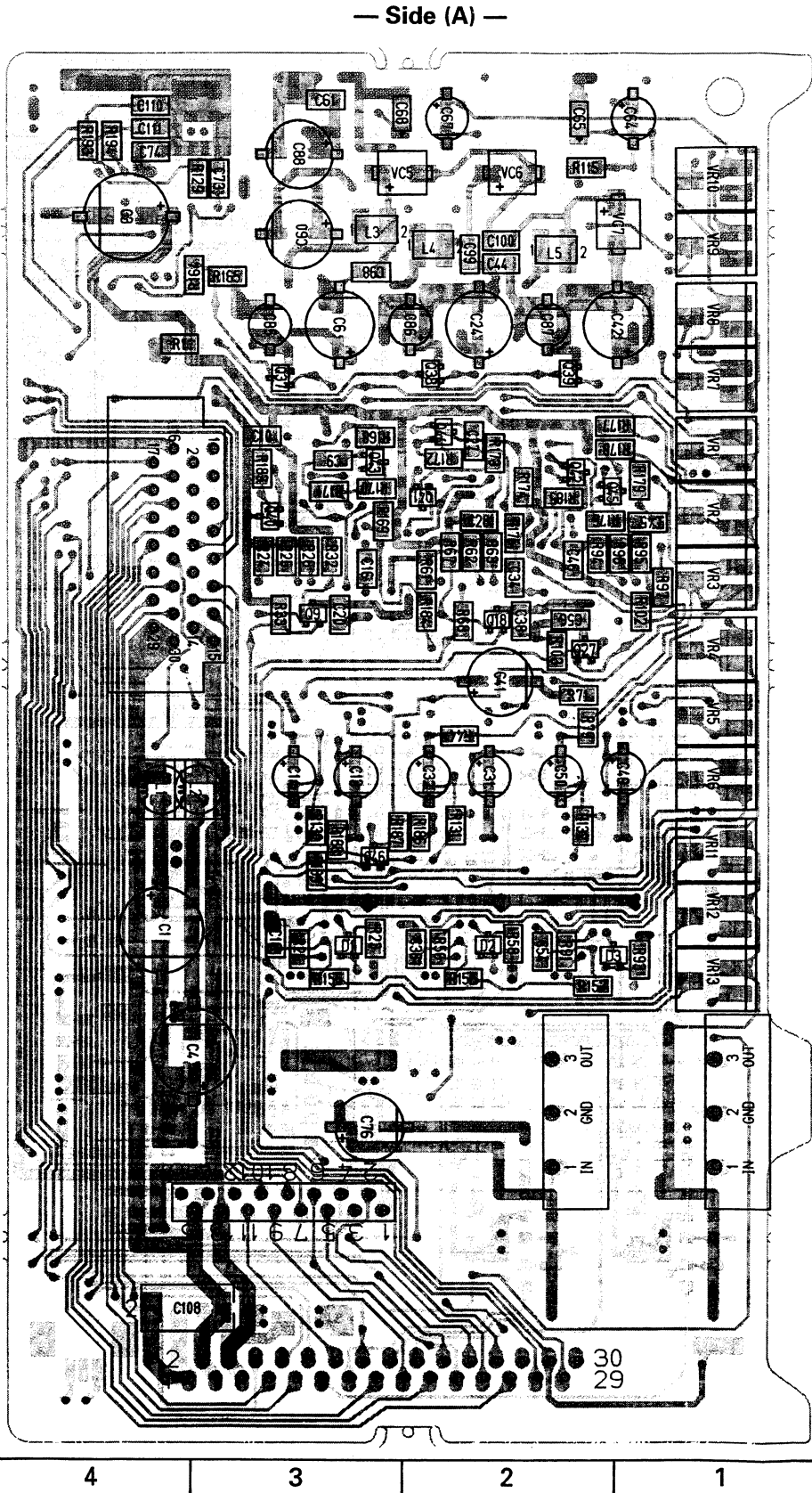


6.9 PR1 CIRCUIT BOARD

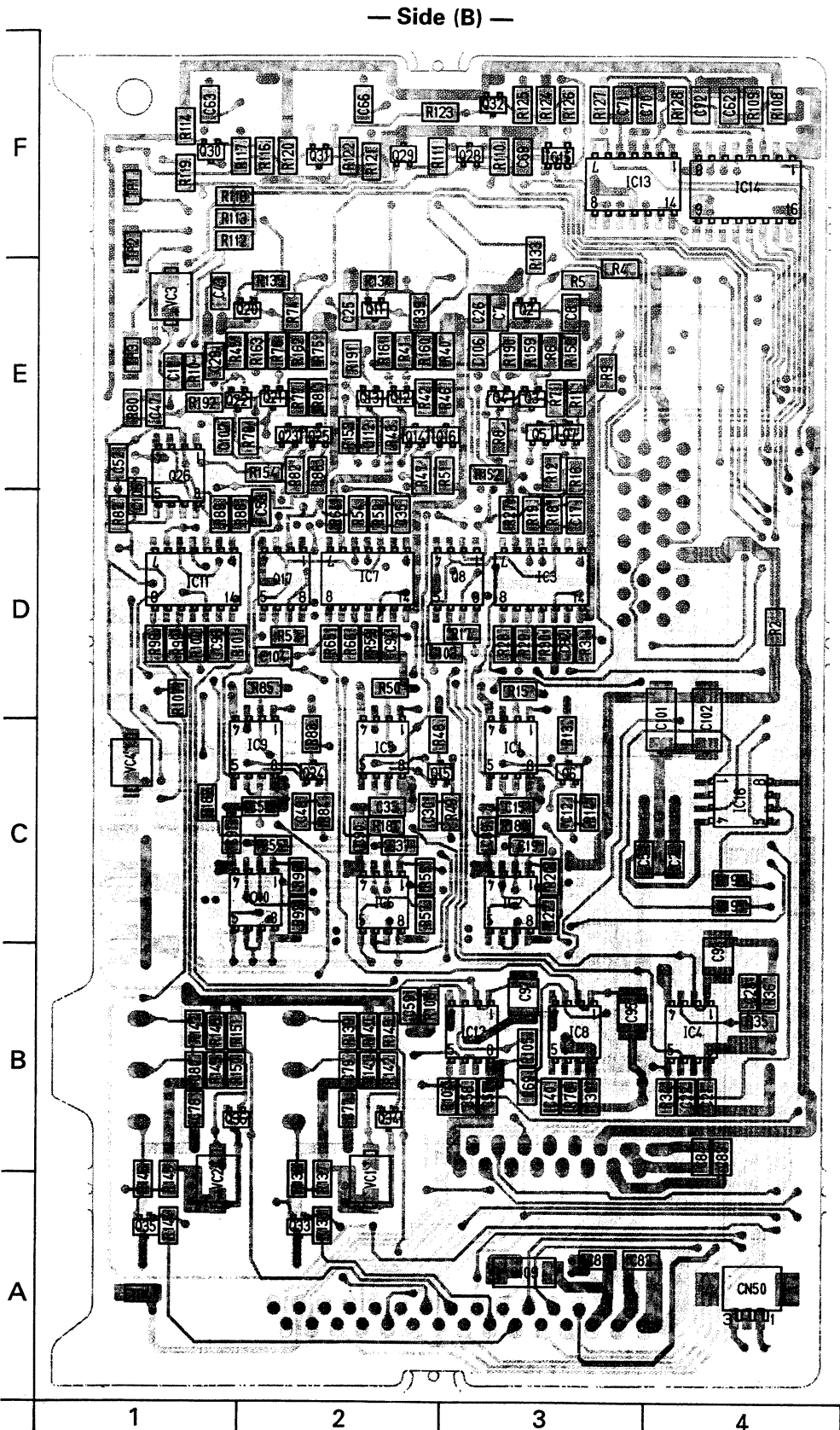
• ADDRESS TABLE OF BOARD PARTS
Each address may have an address error by one interval.



IC1	B- 3C	D1	A- 3C
IC2	B- 3C	D2	A- 2C
IC3	B- 3D	D3	A- 2C
IC4	B- 4B		
IC5	B- 2C	VR1	A- 1E
IC6	B- 2C	VR2	A- 1E
IC7	B- 2D	VR3	A- 1D
IC8	B- 3B	VR4	A- 1D
IC9	B- 2C	VR5	A- 1D
IC10	B- 2C	VR6	A- 1C
IC11	B- 1D	VR7	A- 1E
IC12	B- 3B	VR8	A- 1E
IC13	B- 4F	VR9	A- 1F
IC14	B- 4F	VR10	A- 1F
IC15	B- 3F	VR11	A- 1C
		VR12	A- 1C
		VR13	A- 1C
Q2	B- 3E	VC1	B- 2A
Q3	B- 3E	VC2	B- 1A
Q4	B- 3E	VC3	B- 1E
Q5	B- 3E	VC4	B- 1C
Q6	B- 3C		
Q7	B- 3E		
Q8	B- 3D	TP1	B- 1F
Q9	A- 3D	TP2	B- 1F
Q11	B- 2E	TP3	B- 1E
Q12	B- 2E	TP4	B- 1A
Q13	B- 2E		
Q14	B- 2E		
Q15	B- 3C		
Q16	B- 3E		
Q17	B- 2D		
Q18	A- 2D		
Q20	B- 2E		
Q21	B- 2E		
Q22	B- 2E		
Q23	B- 2E		
Q24	B- 2C		
Q25	B- 2E		
Q26	B- 1E		
Q27	A- 2D		
Q28	B- 3F		
Q29	B- 2F		
Q30	B- 1F		
Q31	B- 2F		
Q32	B- 3F		
Q33	B- 2A		
Q34	B- 2B		
Q35	B- 1A		
Q36	B- 1B		
Q37	A- 3E		
Q38	A- 2E		
Q39	A- 2E		
Q40	A- 3E		
Q41	A- 2E		
Q42	A- 2E		
Q43	A- 3E		
Q44	A- 2E		
Q45	A- 2E		
Q46	A- 3C		

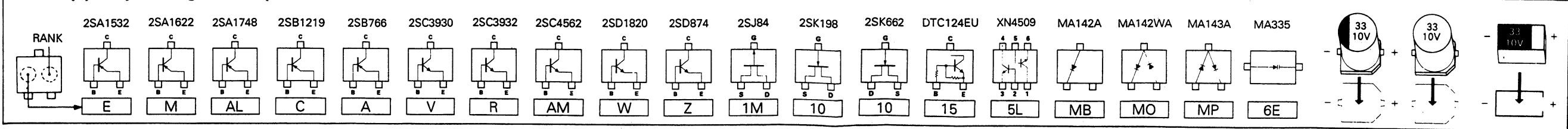


F
E
D
C
B
A



F
E
D
C
B
A

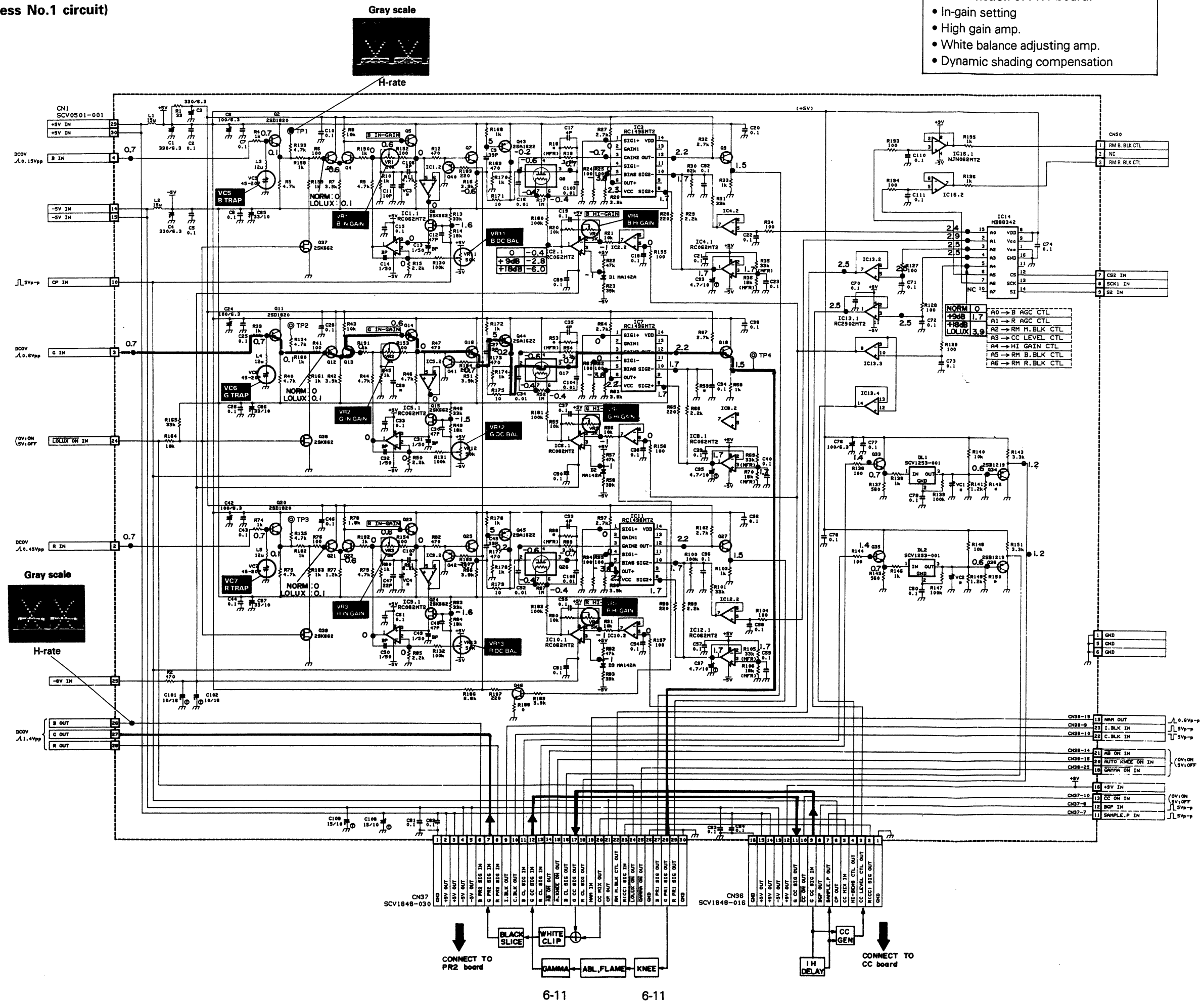
Chip parts pin arrangement (Top view)



6.10 PR1 SCHEMATIC DIAGRAM 07

(Video Process No.1 circuit)

- Main function of PR1 board:
 - In-gain setting
 - High gain amp.
 - White balance adjusting amp.
 - Dynamic shading compensation



PR1

PR2

6.11 PR2 CIRCUIT BOARD

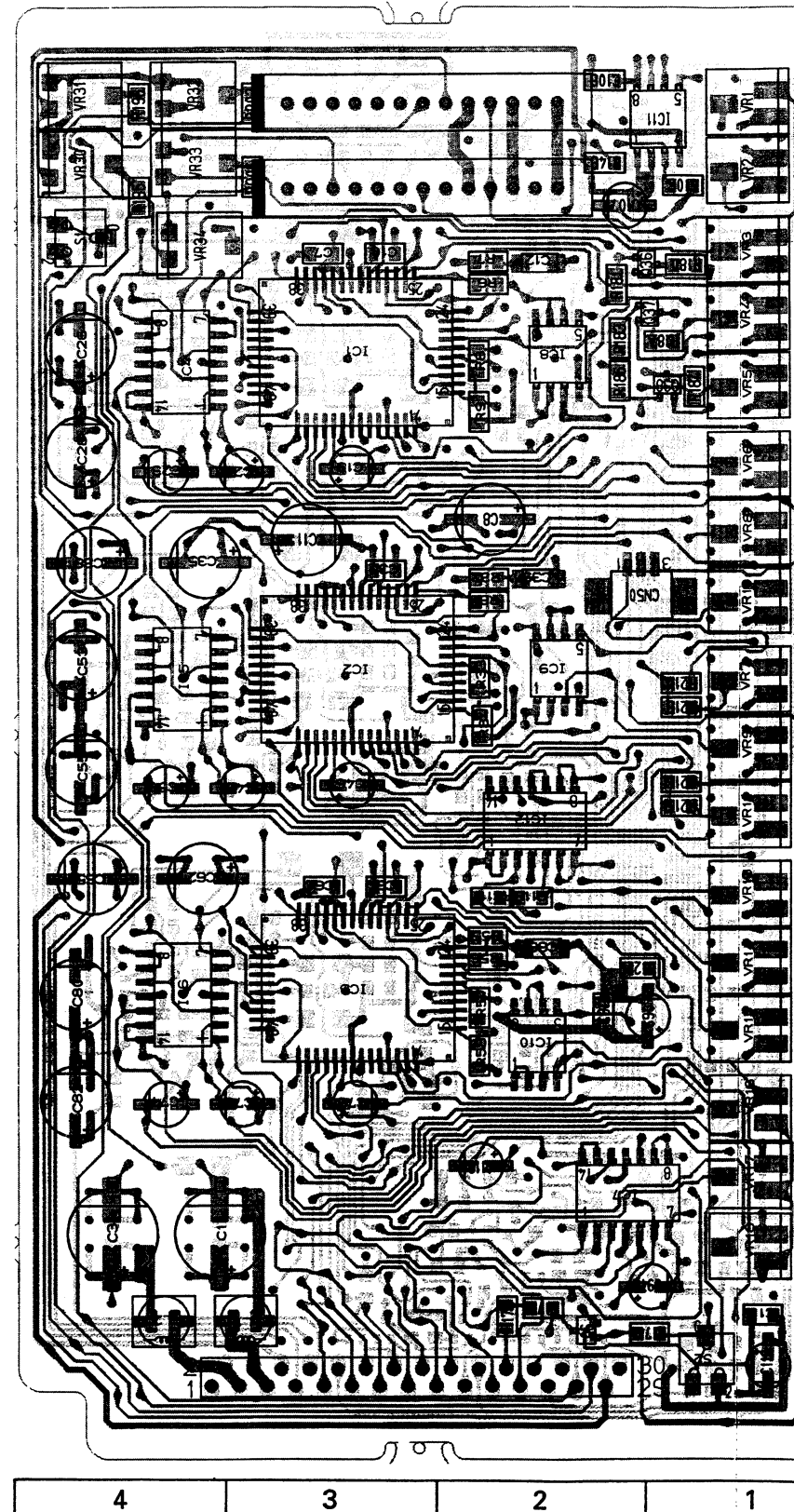
● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

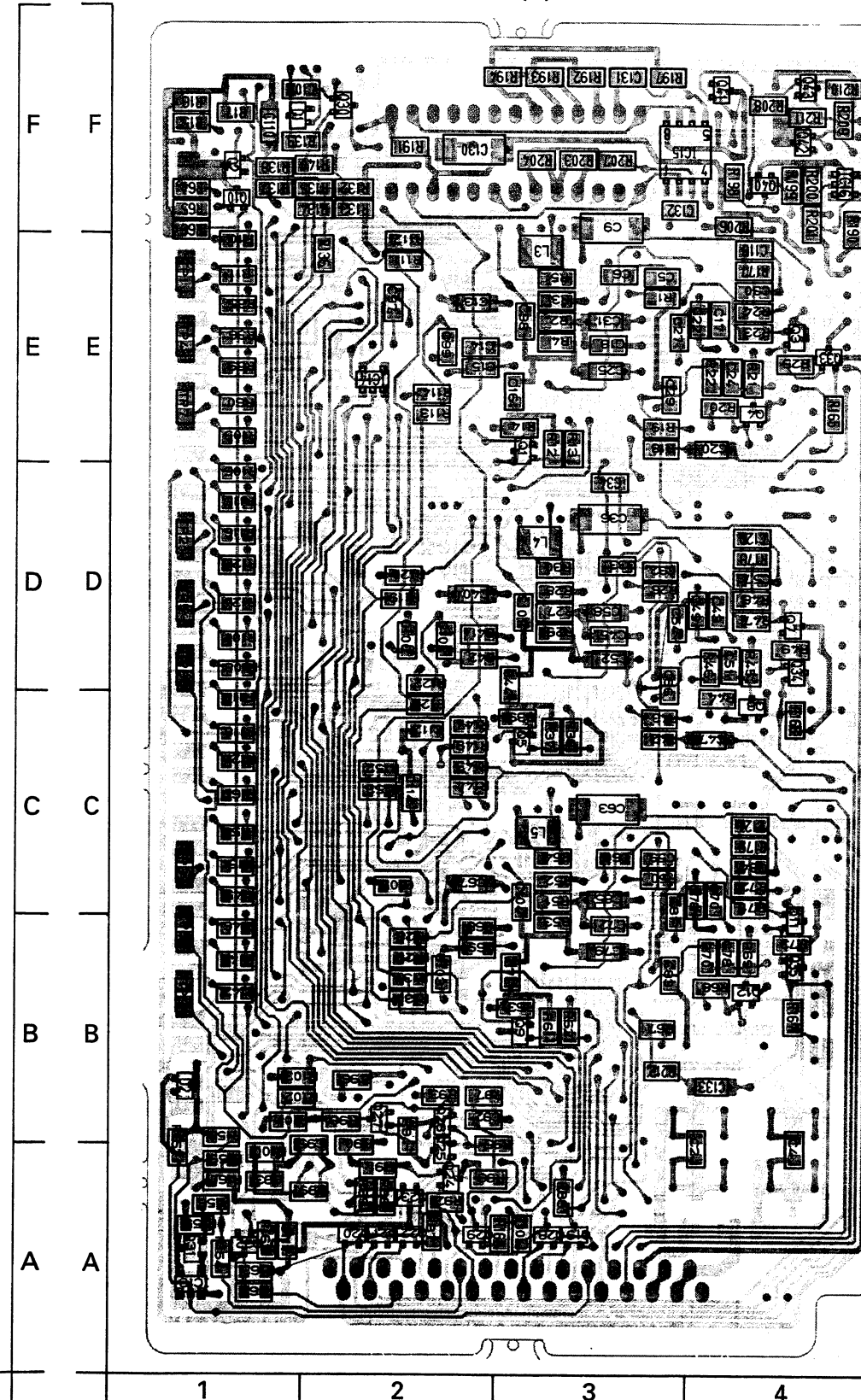
A-1C
Side — Y axis
X axis

IC1	A- 3E	VR14	A- 1C
IC2	A- 3D	VR15	A- 1B
IC3	A- 3B	VR16	A- 1B
IC4	A- 3E	VR17	A- 1B
IC5	A- 3D	VR18	A- 1A
IC6	A- 3B	VR19	A- 3F
IC7	A- 2B	VR20	A- 4F
IC8	A- 2E	VR21	A- 4F
IC9	A- 2D		
IC10	A- 2B	TP1	B- 1E
IC11	A- 2F	TP2	B- 1D
IC12	A- 2C	TP3	B- 1C
IC13	B- 1A	TP4	B- 1E
IC14	B- 2E	TP5	B- 1D
		TP6	B- 1B
Q1	B- 2E	TP7	B- 1E
Q2	B- 1F	TP8	B- 1D
Q3	B- 4E	TP9	B- 1B
Q4	B- 4E		
Q5	B- 2C		
Q6	A- 2A		
Q7	B- 4D		
Q8	B- 4C		
Q9	B- 2B		
Q10	B- 1F		
Q11	B- 4B		
Q12	B- 4B		
Q13	B- 3F		
Q14	B- 3F		
Q15	B- 3F		
Q16	B- 4F		
Q17	B- 4F		
Q18	B- 4F		
Q19	B- 3A		
Q20	B- 2A		
Q21	B- 2A		
Q22	B- 2A		
Q23	B- 2A		
Q24	B- 2A		
Q25	B- 2A		
Q26	B- 2B		
Q27	B- 2B		
Q28	B- 3A		
Q29	B- 2A		
Q30	B- 2F		
Q31	B- 1A		
Q32	B- 1A		
Q33	B- 4E		
Q34	B- 4D		
Q35	B- 4B		
Q36	A- 1E		
Q37	A- 1E		
Q38	A- 1E		
D1	B- 2F		
VR1	A- 1F		
VR2	A- 1F		
VR3	A- 1E		
VR4	A- 1E		
VR5	A- 1E		
VR6	A- 1E		
VR7	A- 1D		
VR8	A- 1D		
VR9	A- 1C		
VR10	A- 1D		
VR11	A- 1C		
VR13	A- 1C		

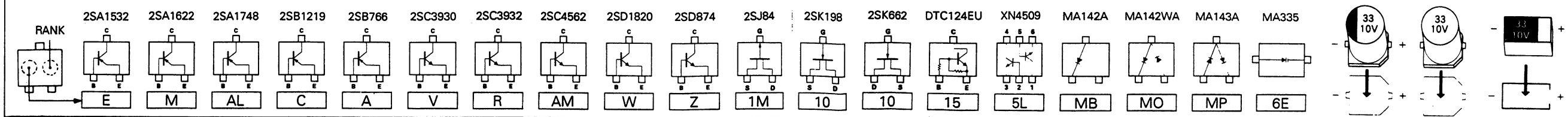
— Side (A) —



— Side (B) —



Chip parts pin arrangement (Top view)



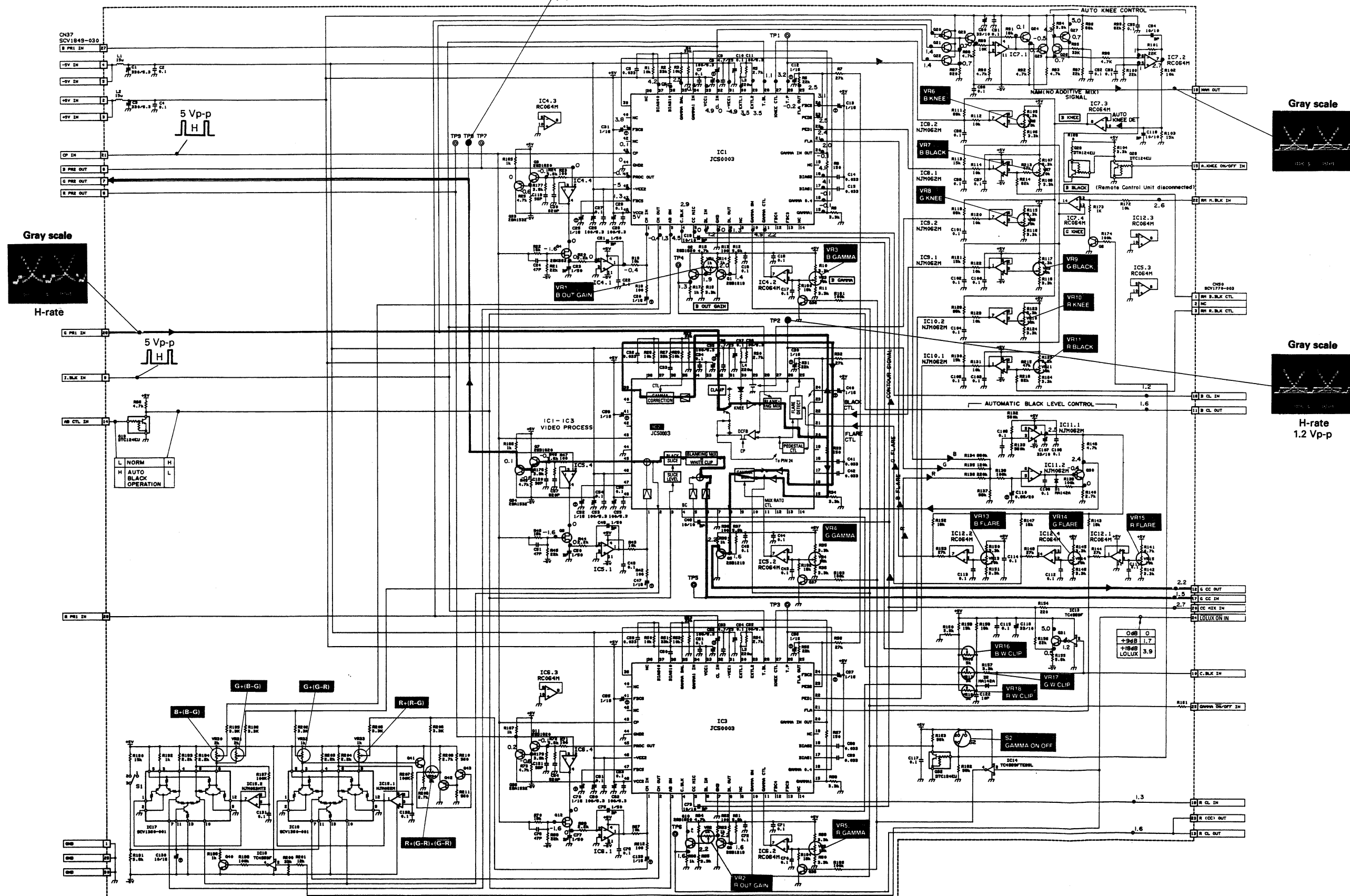
Revised in Oct. 1992 6-12

6-12

Gray scale

H-rate
1.4 Vp-p

- Knee compression
- Flare correction
- ABL
- Gamma correction
- White clip
- Black slice



6.13 CC CIRCUIT BOARD

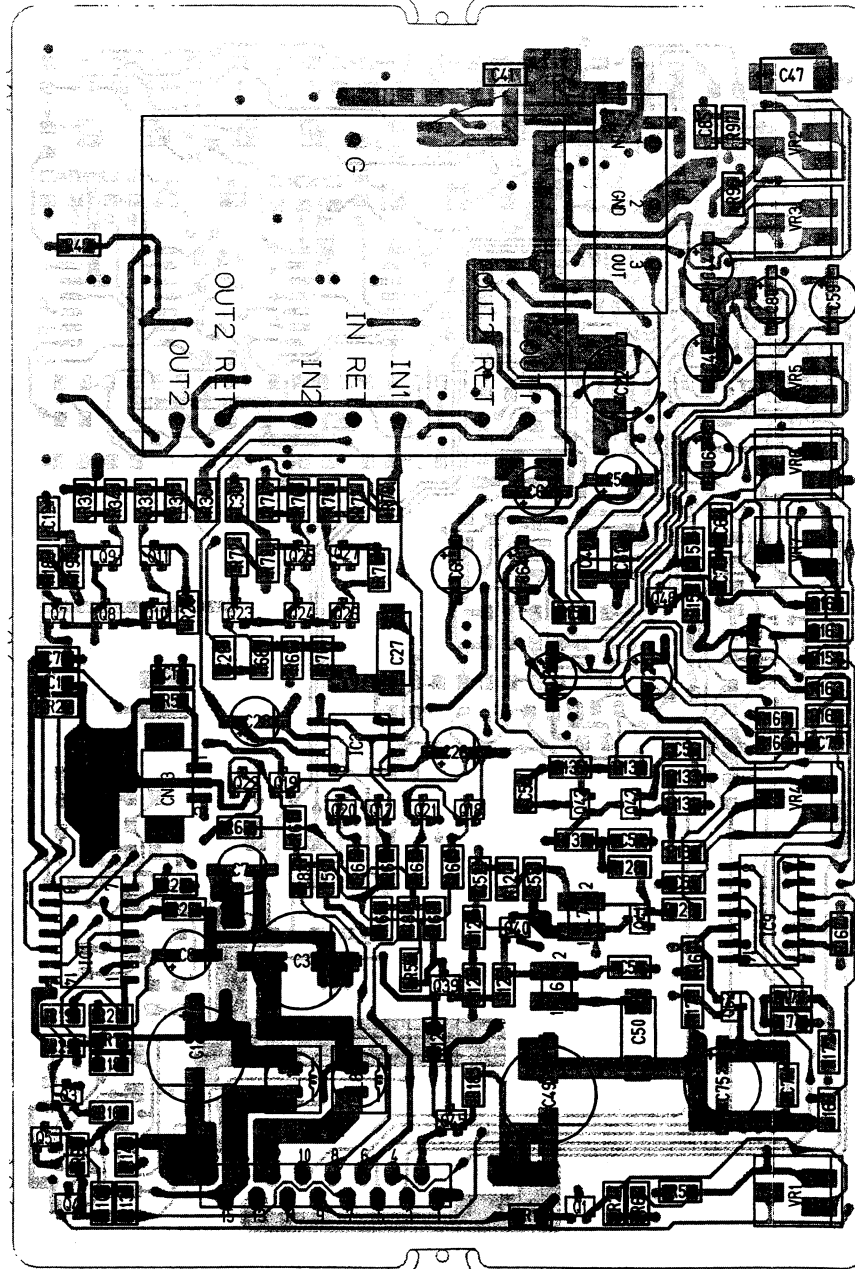
● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

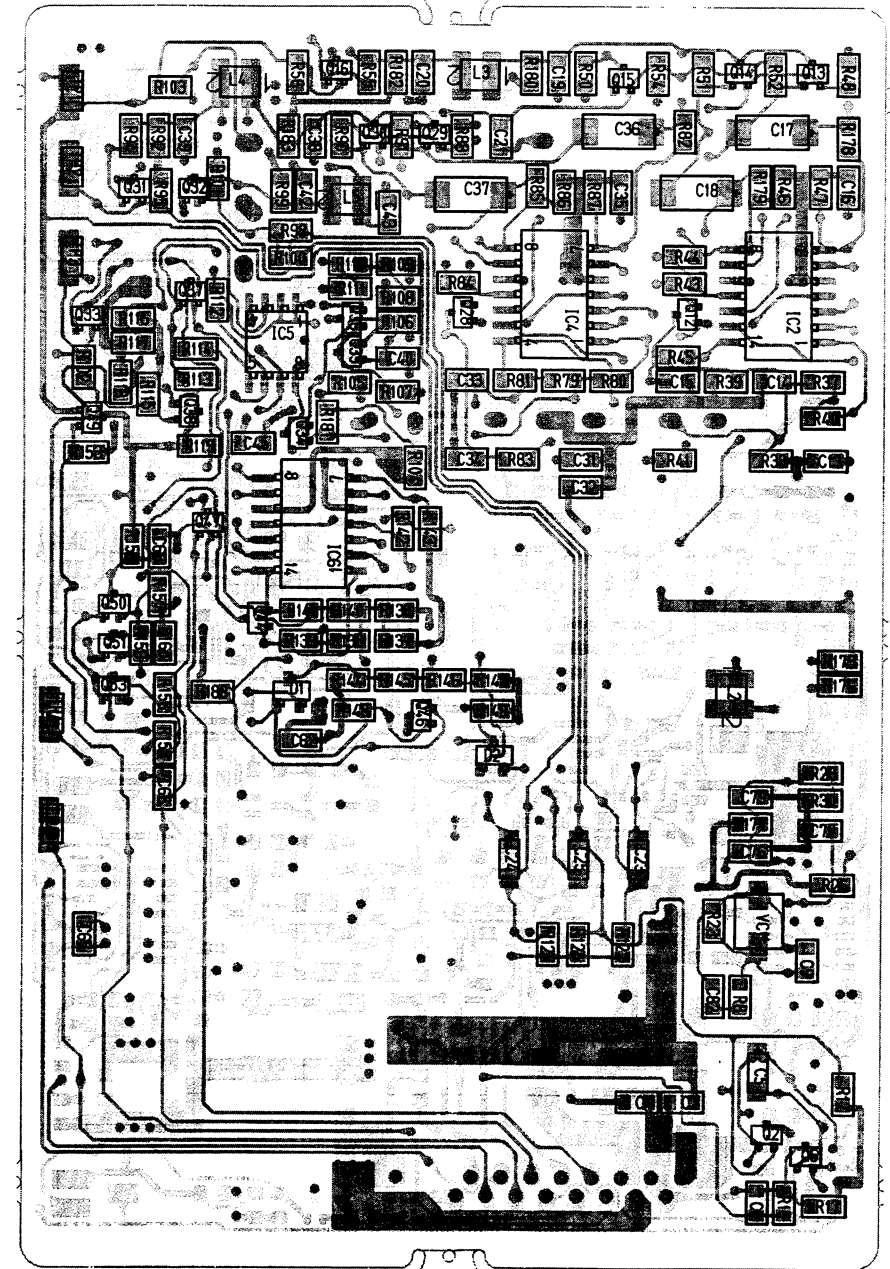
A-1C
Side — Y axis
— X axis

IC1	A- 4B	VR4	A- 1C
IC2	B- 4E	VR5	A- 1E
IC3	A- 3C	VR6	A- 1D
IC4	B- 3E	VR7	A- 1D
IC5	B- 2E		
IC6	B- 2D	VC1	B- 4B
IC9	A- 1B		
		TP1	B- 1F
Q1	A- 2A	TP2	B- 1F
Q2	B- 4A	TP3	B- 1E
Q3	A- 4A	TP4	B- 1C
Q4	A- 4A	TP5	B- 1C
Q5	A- 4A		
Q6	B- 4A		
Q7	A- 4D		
Q8	A- 4D		
Q9	A- 4D		
Q10	A- 4D		
Q11	A- 4D		
Q12	B- 4E		
Q13	B- 4F		
Q14	B- 4F		
Q15	B- 3F		
Q16	B- 2F		
Q17	A- 3C		
Q18	A- 2C		
Q19	A- 3C		
Q20	A- 3C		
Q21	A- 3C		
Q22	A- 3C		
Q23	A- 3D		
Q24	A- 3D		
Q25	A- 3D		
Q26	A- 3D		
Q27	A- 3D		
Q28	B- 3E		
Q29	B- 2F		
Q30	B- 2F		
Q31	B- 1F		
Q32	B- 1F		
Q33	B- 1E		
Q34	B- 2D		
Q35	B- 2E		
Q36	B- 2E		
Q37	B- 1E		
Q38	B- 1E		
Q39	A- 2B		
Q40	A- 2B		
Q41	A- 2B		
Q42	A- 2C		
Q43	A- 2C		
Q44	B- 2D		
Q45	A- 2A		
Q46	B- 2C		
Q47	B- 1D		
Q48	A- 1D		
Q49	B- 1E		
Q50	B- 1D		
Q51	B- 1C		
Q52	A- 1B		
Q53	B- 1C		
D1	B- 2C		
D2	B- 3C		
VR1	A- 1A		
VR2	A- 1F		
VR3	A- 1E		

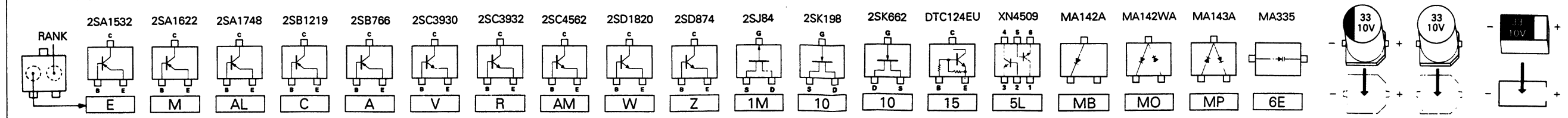
— Side (A) —



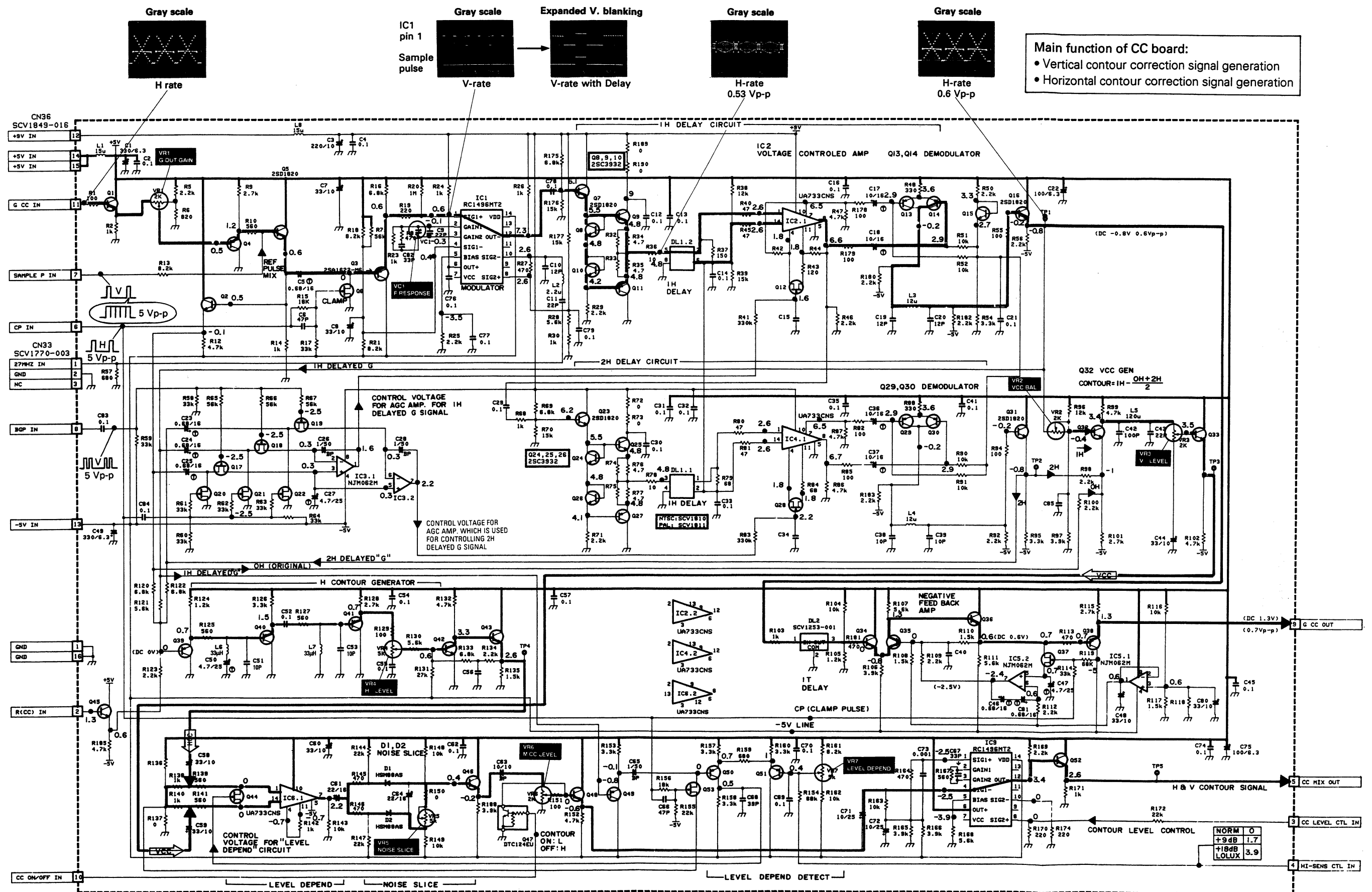
— Side (B) —



Chip parts pin arrangement (Top view)



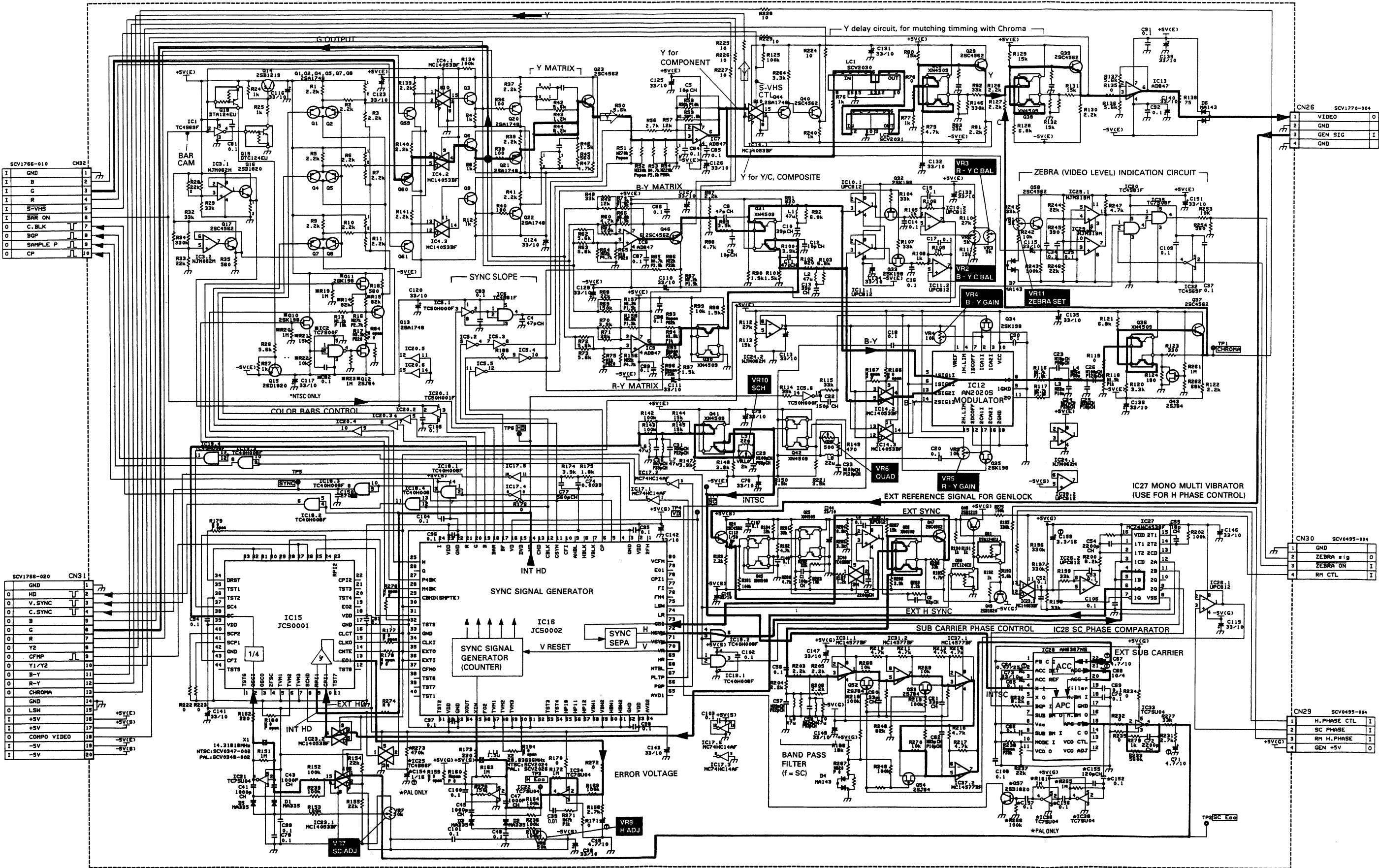
6.14 CC SCHEMATIC DIAGRAM 09 (Contour Corrector)



6.16 SE SCHEMATIC DIAGRAM 10
(Sync Signal Generator and Color Encoder)

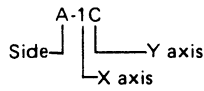
- Notes:
- In the diagram, resistors and capacitors whose resistance or capacitance is written following a letter N or P are used in the NTSC model (indicated by N) and the PAL model (indicated by P) respectively.
 - In the diagram, parts marked with asterisk (*) are used only in the NTSC model, while those marked with black star (*) are used only in the PAL model.

- Main function of SE board:
- Sync. signal generation
 - Color encoding
 - Genlock circuit
 - Color bars signal generation



6.17 CP1/CP2 CIRCUIT BOARDS

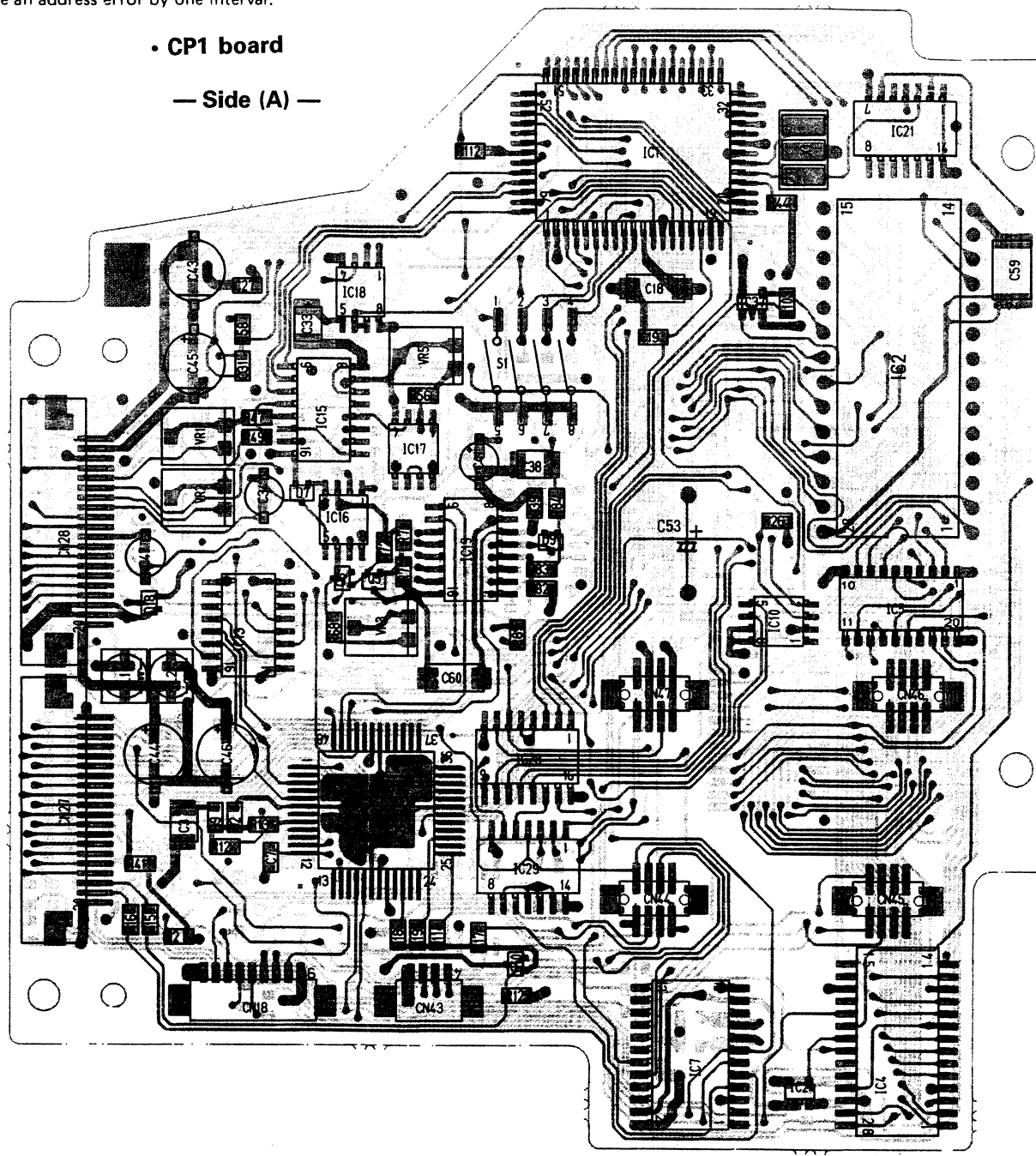
• ADDRESS TABLE OF BOARD PARTS
Each address may have an address error by one interval.



IC1	A- 3F
IC2	A- 1D
IC3	B- 2C
IC4	A- 1A
IC5	A- 1C
IC6	B- 2E
IC7	A- 3A
IC8	B- 4B
IC9	A- 4B
IC10	A- 2C
IC11	B- 2D
IC13	A- 5C
IC14	B- 6D
IC15	A- 5D
IC16	A- 4D
IC17	A- 4D
IC18	A- 4E
IC19	A- 4C
IC20	B- 3D
IC21	A- 1F
IC22	B- 2E
IC23	B- 5E
IC24	A- 2A
IC28	A- 3C
IC29	A- 3B
IC31	B- 5D
IC32	B- 4E
IC37	A- 2E
Q3	B- 6B
Q4	B- 6B
Q5	A- 4C
Q6	A- 5C
Q7	B- 2D
Q8	B- 2E
Q9	B- 2E
Q10	A- 4A
D3	B- 4C
D4	B- 5B
D5	B- 4D
D6	B- 4E
D7	A- 5D
D8	B- 4D
D9	A- 3D
D10	B- 3D
D11	B- 6C
D12	B- 4C
D13	B- 3D
D14	B- 4D
D15	B- 6D
D18	A- 6C
D20	B- 6D
VR1	A- 5D
VR2	A- 5D
VR3	A- 4C
VR5	A- 4E

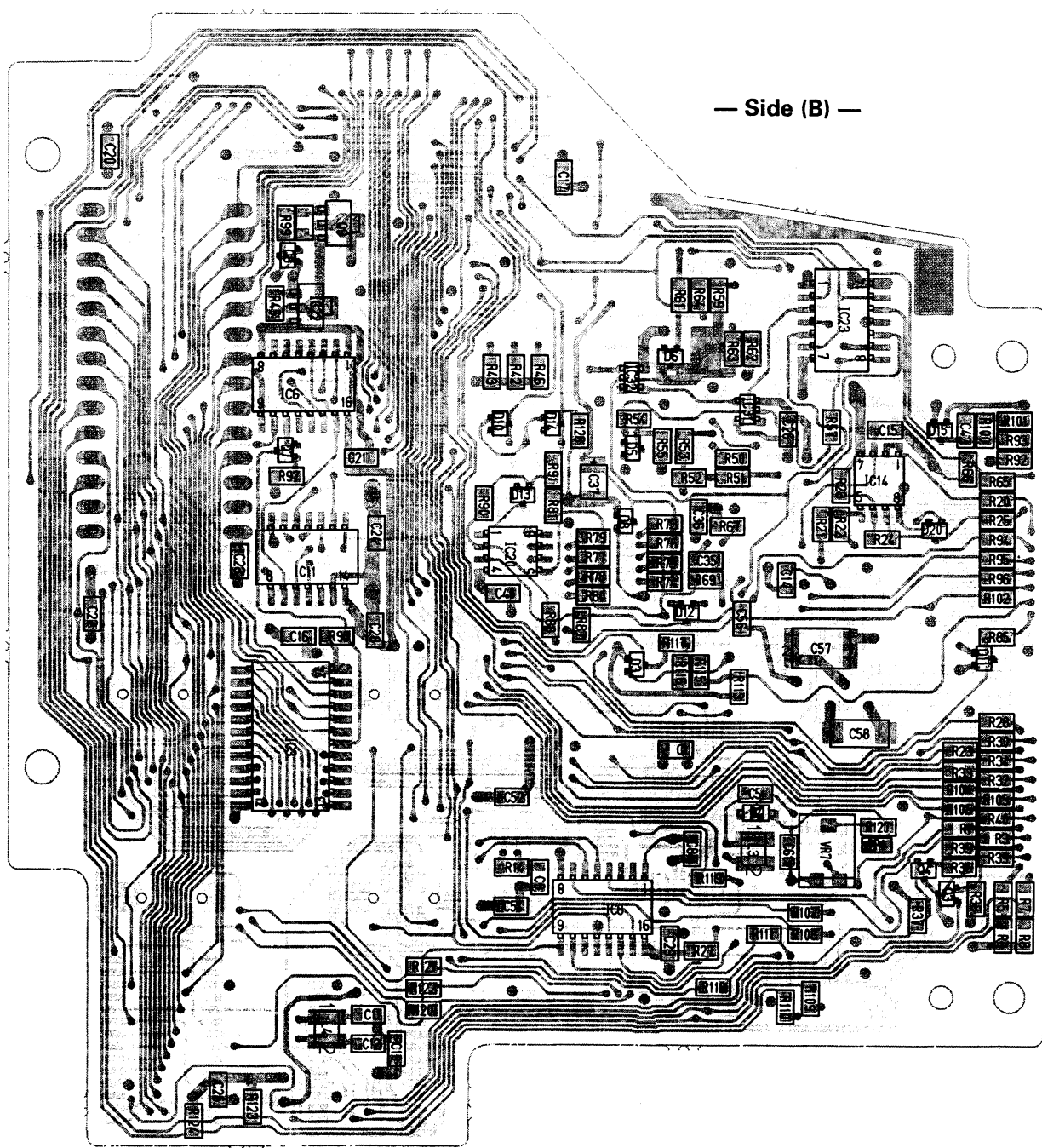
• CP1 board

— Side (A) —



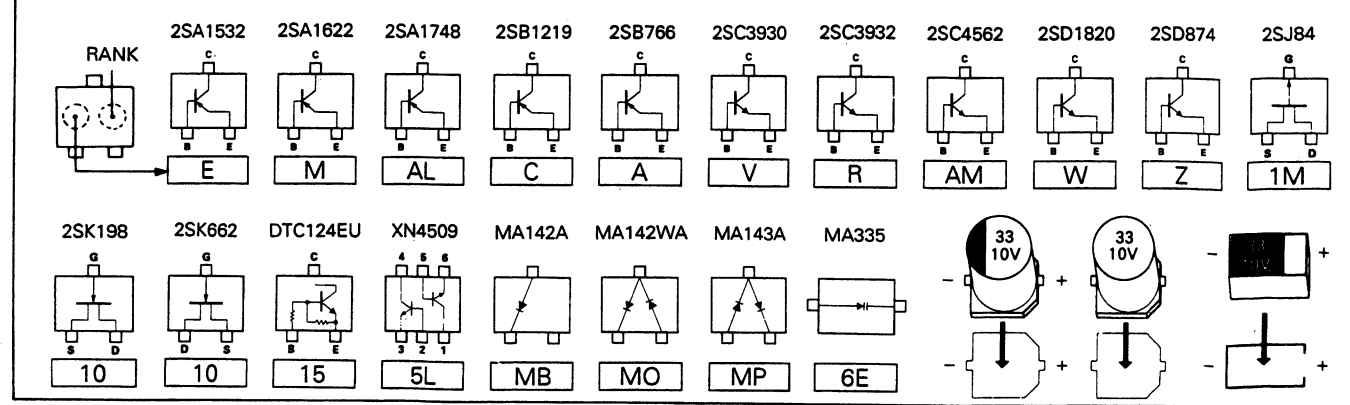
F	F
E	E
D	D
C	C
B	B
A	A

— Side (B) —



6	5	4	3	2	1	1	2	3	4	5	6
---	---	---	---	---	---	---	---	---	---	---	---

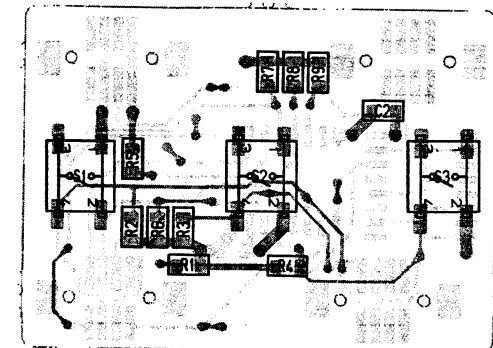
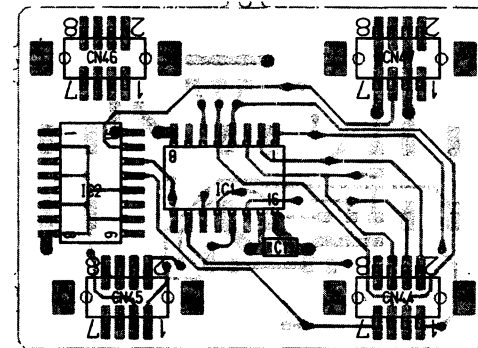
Chip parts pin arrangement (Top view)



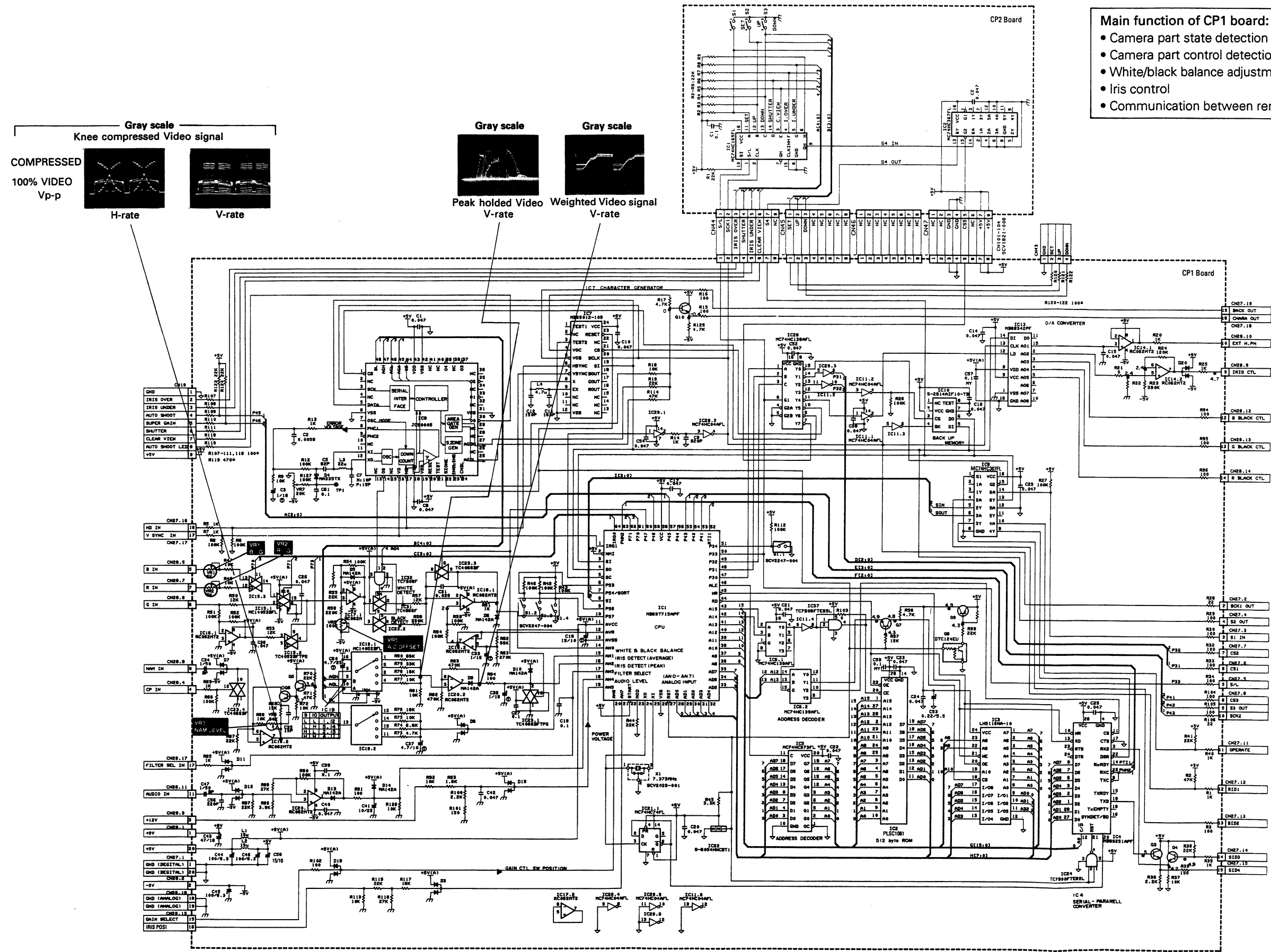
• CP2 board

— Side (A) —

— Side (B) —



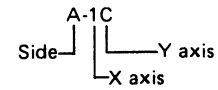
6.18 CP1/CP2 SCHEMATIC DIAGRAMS 11 / 12
(CPU circuit)



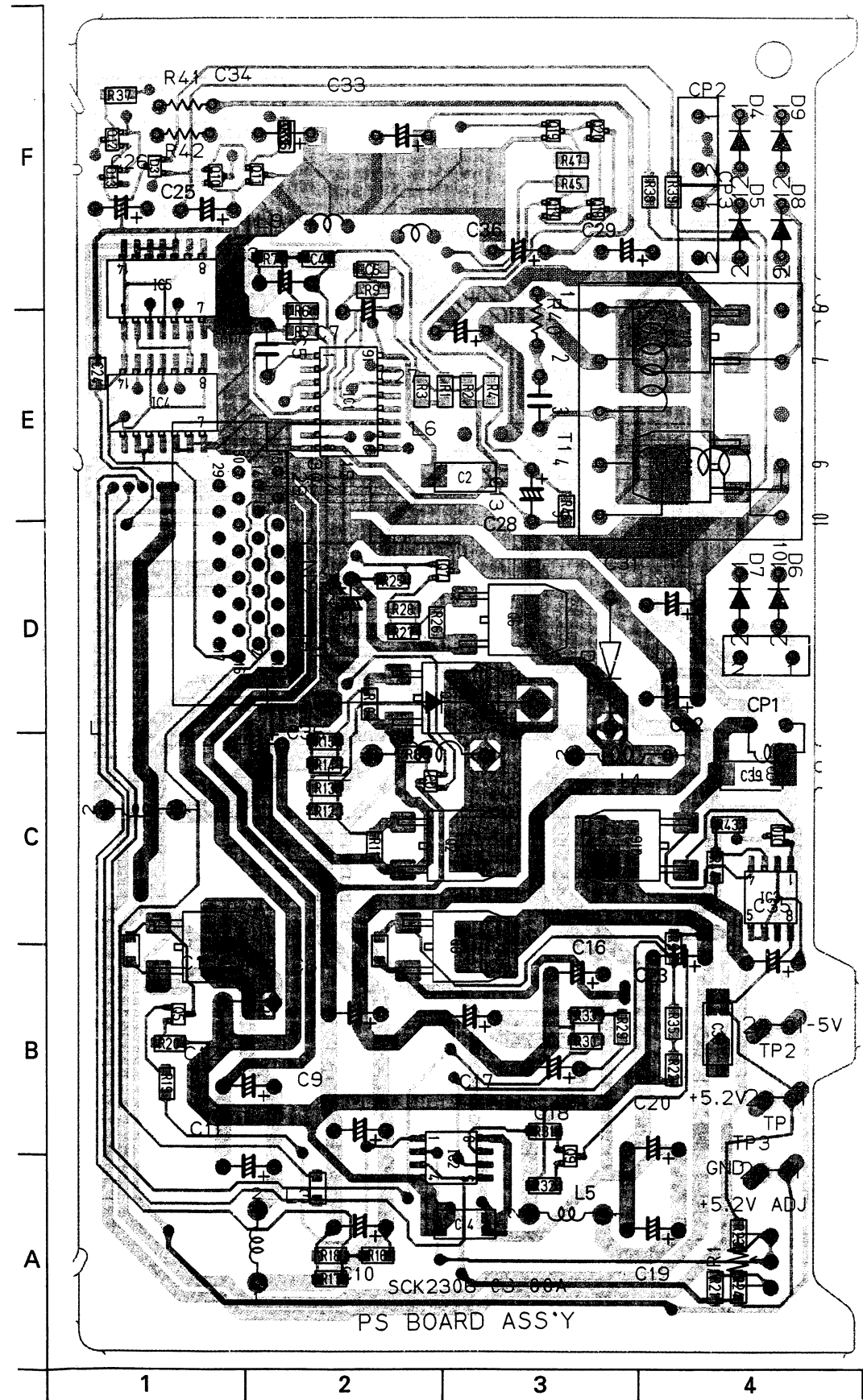
6.19 PS CIRCUIT BOARD

• ADDRESS TABLE OF BOARD PARTS

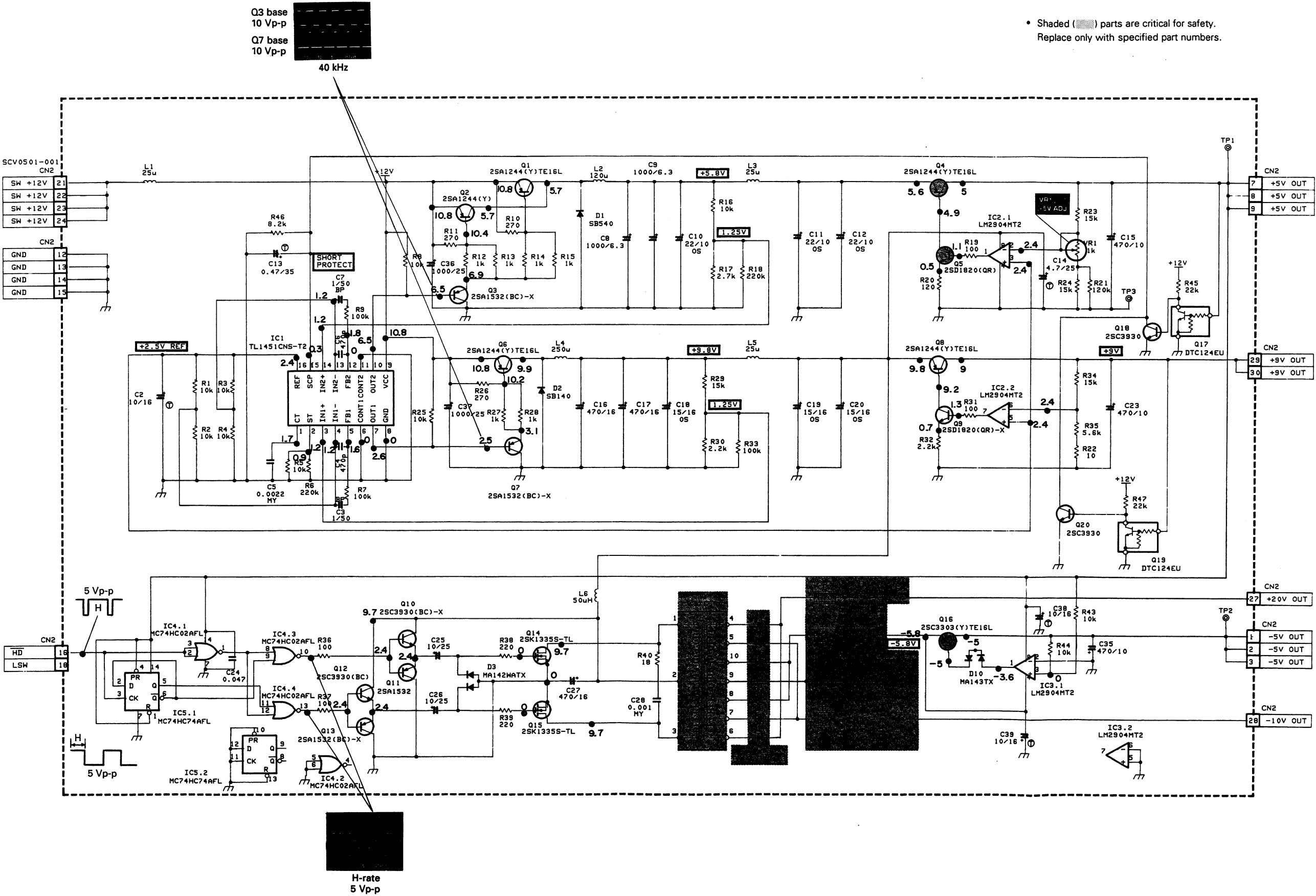
Each address may have an address error by one interval.



IC1	B- 2E	R31	B- 3A	TP2	A- 4B
IC2	B- 2A	R32	B- 3A	TP3	A- 4A
IC3	B- 4C	R33	B- 3B		
IC4	B- 1E	R34	B- 4B	T1	A- 3E
IC5	B- 1E	R35	B- 4B	CP1	A- 4D
		R36	B- 2F	CP2	A- 4F
Q1	B- 2C	R37	B- 1F	CP3	A- 4F
Q2	B- 2C	R38	B- 3F		
Q3	B- 2C	R39	B- 4F	CN2	A- 2D
Q4	B- 1B	R40	A- 3E		
Q5	B- 1B	R41	A- 1F		
Q6	B- 3D	R42	A- 1F		
Q7	B- 2D	R43	B- 4C		
Q8	B- 2B	R44	B- 4C		
Q9	B- 3A	R45	B- 3F		
Q10	B- 1F	R46	B- 3D		
Q11	B- 1F	R47	B- 3F		
Q12	B- 1F				
Q13	B- 1F	VR1	A- 4A		
Q14	B- 4E				
Q15	B- 4D	C2	B- 3D		
Q16	B- 3C	C3	A- 2E		
Q17	B- 3F	C4	B- 2E		
Q18	B- 3F	C5	A- 2E		
Q19	B- 3F	C6	B- 2E		
Q20	B- 3F	C7	A- 2E		
		C8	A- 2B		
D1	A- 3C	C9	A- 2A		
D2	A- 3C	C10	A- 2A		
D3	B- 1F	C11	A- 2A		
D4	A- 4F	C12	A- 2B		
D5	A- 4F	C13	A- 3D		
D6	A- 4D	C14	B- 3A		
D7	A- 4D	C15	A- 2B		
D8	A- 4F	C16	A- 3B		
D9	A- 4F	C17	A- 3B		
D10	B- 4C	C18	A- 3B		
		C19	A- 4A		
R1	B- 2E	C20	A- 4A		
R2	B- 3E	C23	A- 4B		
R3	B- 2E	C24	B- 1E		
R4	B- 3E	C25	A- 1F		
R5	B- 2E	C26	A- 1F		
R6	B- 2E	C27	A- 3E		
R7	B- 2E	C28	A- 3E		
R8	B- 2C	C29	A- 3E		
R9	B- 2E	C30	A- 3E		
R10	B- 2C	C31	A- 4D		
R11	B- 2C	C32	A- 4C		
R12	B- 2C	C33	A- 2F		
R13	B- 2C	C34	A- 2F		
R14	B- 2C	C35	A- 4B		
R15	B- 2C	C36	A- 1C		
R16	B- 2A	C37	A- 2D		
R17	B- 2A	C38	B- 4B		
R18	B- 2A	C39	B- 4C		
R19	B- 1B				
R20	B- 1B	L1	A- 1C		
R21	B- 4A	L2	A- 2C		
R22	B- 4B	L3	A- 1A		
R23	B- 4A	L4	A- 4C		
R24	B- 4A	L5	A- 3A		
R25	B- 2D	L6	A- 3E		
R26	B- 2D	L7	A- 2E		
R27	B- 2D	L8	A- 4C		
R28	B- 2D	L9	A- 2F		
R29	B- 3B				
R30	B- 3B	TP1	A- 4B		

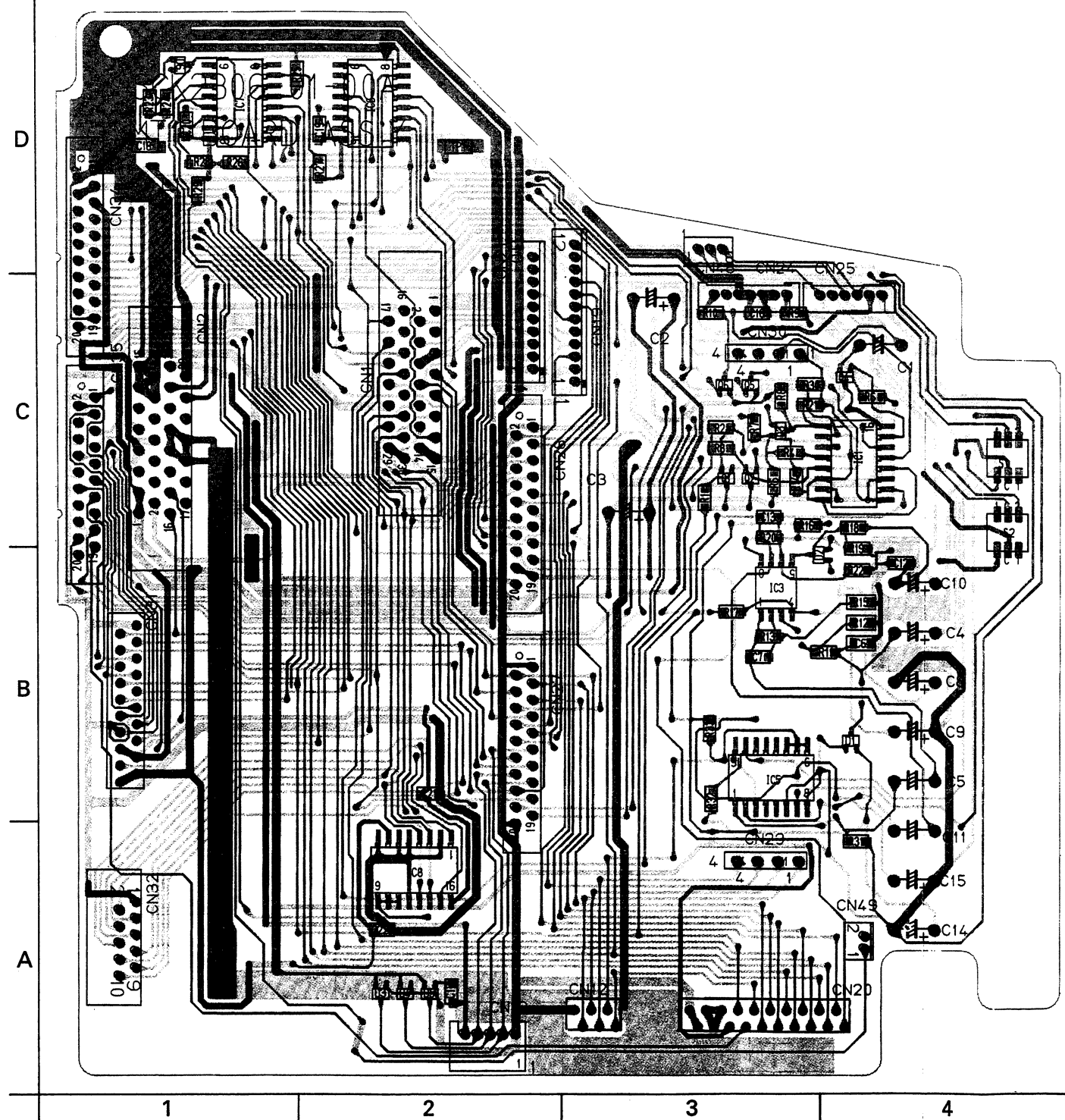


6.20 PS SCHEMATIC DIAGRAM 13
(Power Supply)



6.21 MT1/IF/SW CIRCUIT BOARDS

• MT1 board



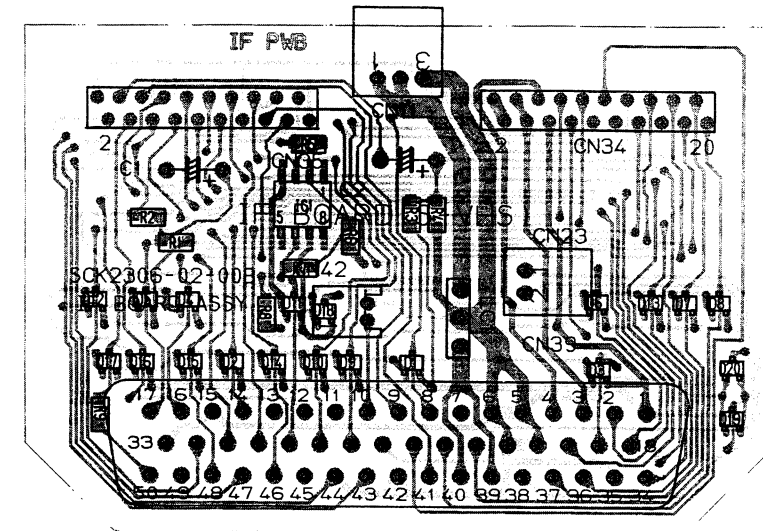
• ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

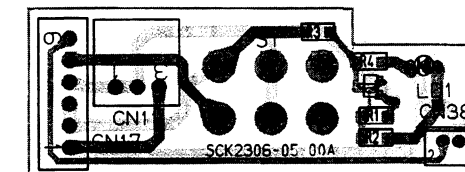


IC1	B- 4C	R1	B- 3C	R22	B- 4B	C9	A- 4B	CN2	A- 1C
IC3	B- 3B	R2	B- 3C	R23	B- 1D	C10	A- 4C	CN12	A- 3A
IC5	B- 3A	R3	B- 3C	R24	B- 1D	C11	A- 4B	CN13	A- 2A
IC6	B- 2D	R4	B- 3C	R25	B- 1D	C12	B- 4B	CN19	A- 3C
IC7	B- 1D	R5	B- 3C	R26	B- 1D	C13	B- 3C	CN20	A- 4A
IC8	B- 2A	R6	B- 4C	R27	B- 2D	C14	A- 4A	CN21	A- 2C
		R7	B- 3C	R28	B- 1D	C15	A- 4A	CN24	A- 3C
Q1	B- 3C	R8	B- 3C	R29	B- 1D	C16	B- 3C	CN25	A- 4C
Q2	B- 3C	R9	B- 3C	R30	B- 4C	C17	B- 2A	CN27	A- 2B
Q3	B- 3C	R10	B- 3C	R31	B- 4A	C18	B- 1D	CN28	A- 2C
Q4	B- 4C	R11	B- 4B	R32	B- 3B	C19	B- 2D	CN29	A- 3A
Q5	B- 3C	R12	B- 4B	R33	B- 3B	C20	B- 1D	CN30	A- 3C
Q6	B- 3C	R13	B- 3B			C21	B- 2A	CN31	A- 1B
		R14	B- 3C	C1	A- 4C	C22	B- 2A	CN32	A- 1A
D1	B- 4B	R15	B- 4B	C2	A- 3C			CN34	A- 1D
D2	B- 4B	R16	B- 3C	C3	A- 3C	TP1	B- 2D	CN35	A- 1C
D3	B- 2A	R17	B- 3B	C4	A- 4B			CN48	A- 3D
D4	B- 2A	R18	B- 4C	C5	A- 4B	S1	B- 4C	CN49	A- 4A
D5	B- 2A	R19	B- 4B	C6	B- 4B	S2	B- 4C		
D6	B- 1D	R20	B- 3C	C7	B- 3B				
		R21	B- 4C	C8	A- 4B	CN1	A- 2C		

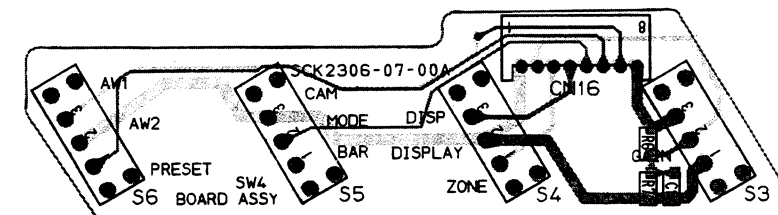
• IF board



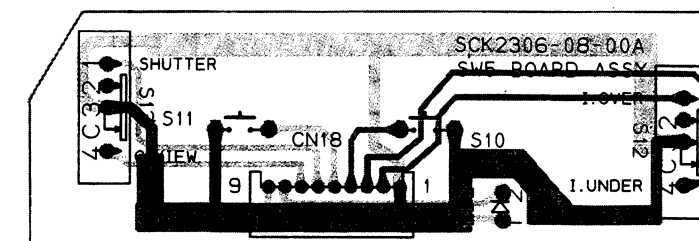
• SW2 board



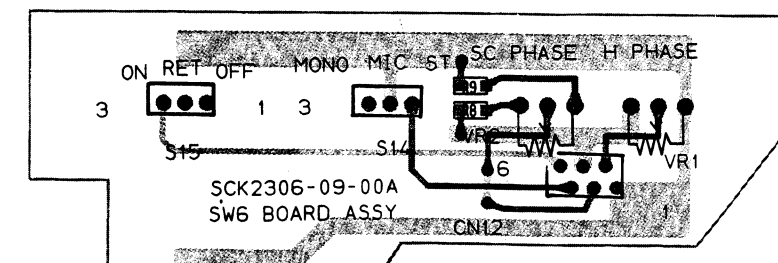
• SW4 board



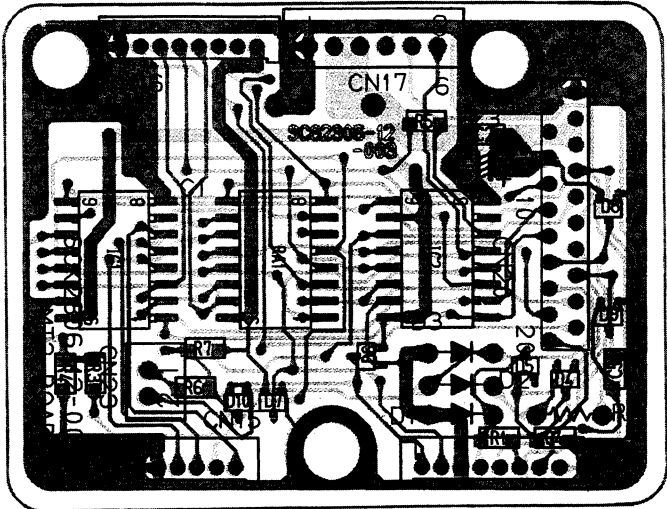
• SW5 board



• SW6 board



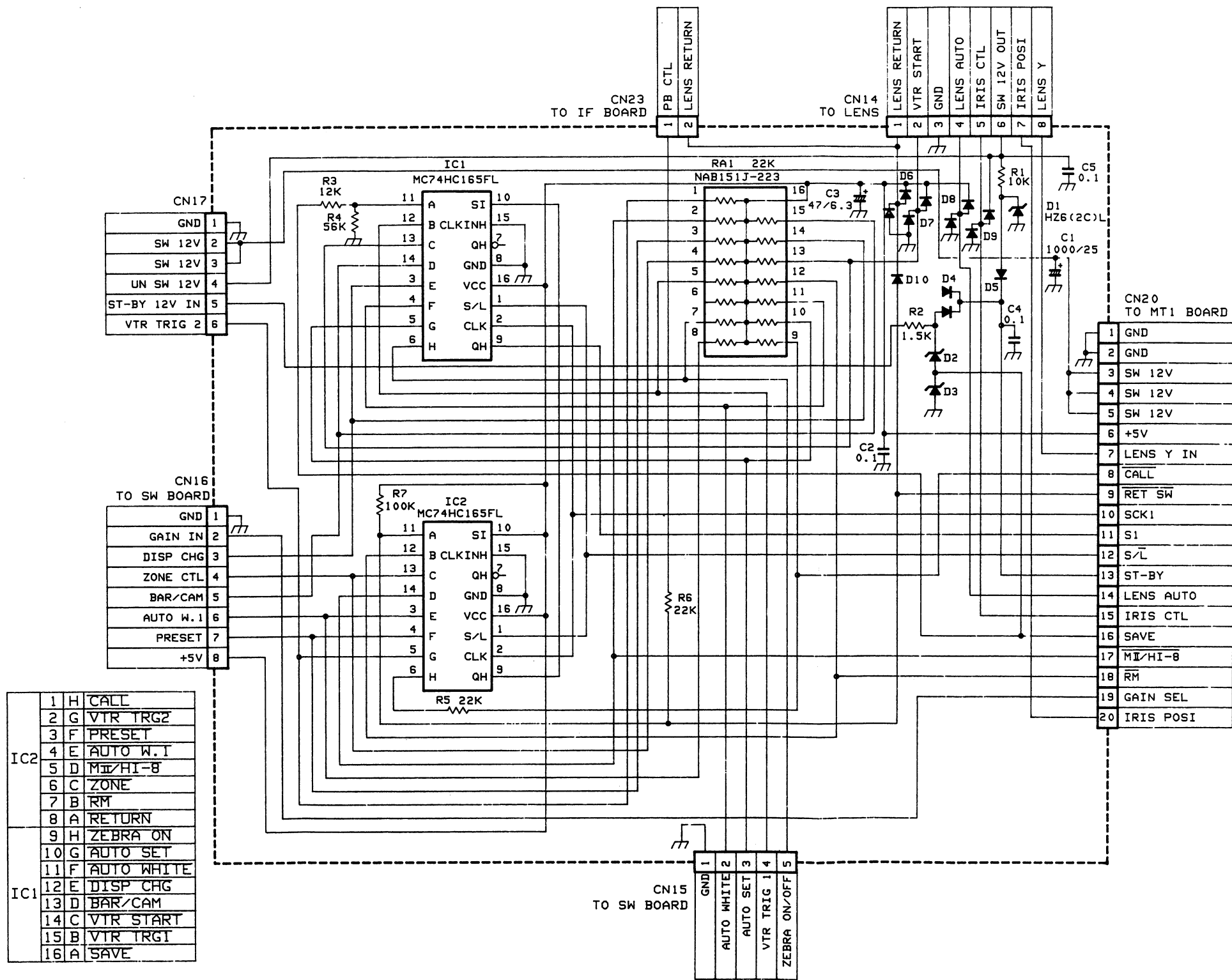
6.22 MT2 CIRCUIT BOARD



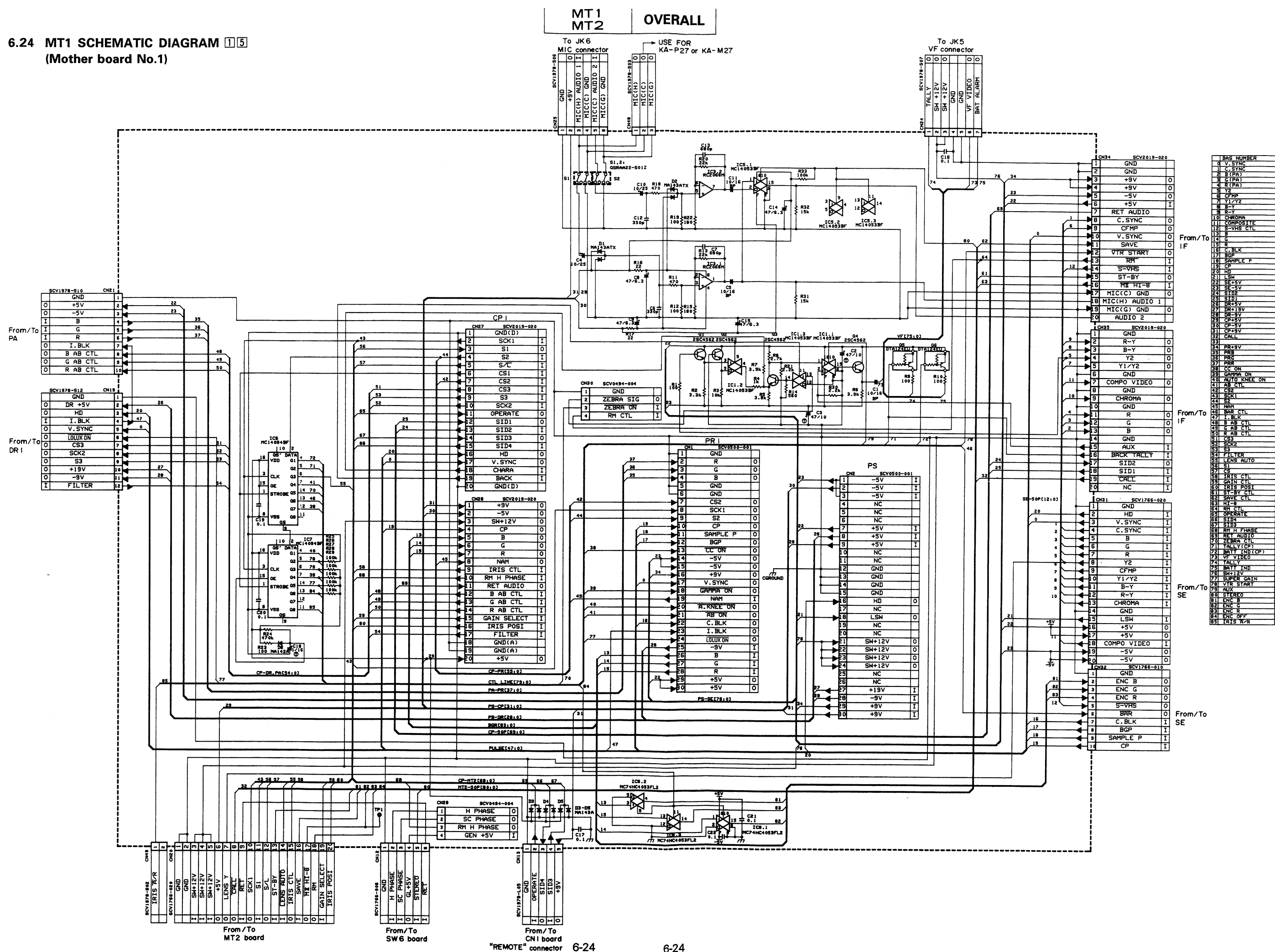
6.23 MT2 SCHEMATIC DIAGRAM 16
(Mother board No.2)

Main function of MT2 board:

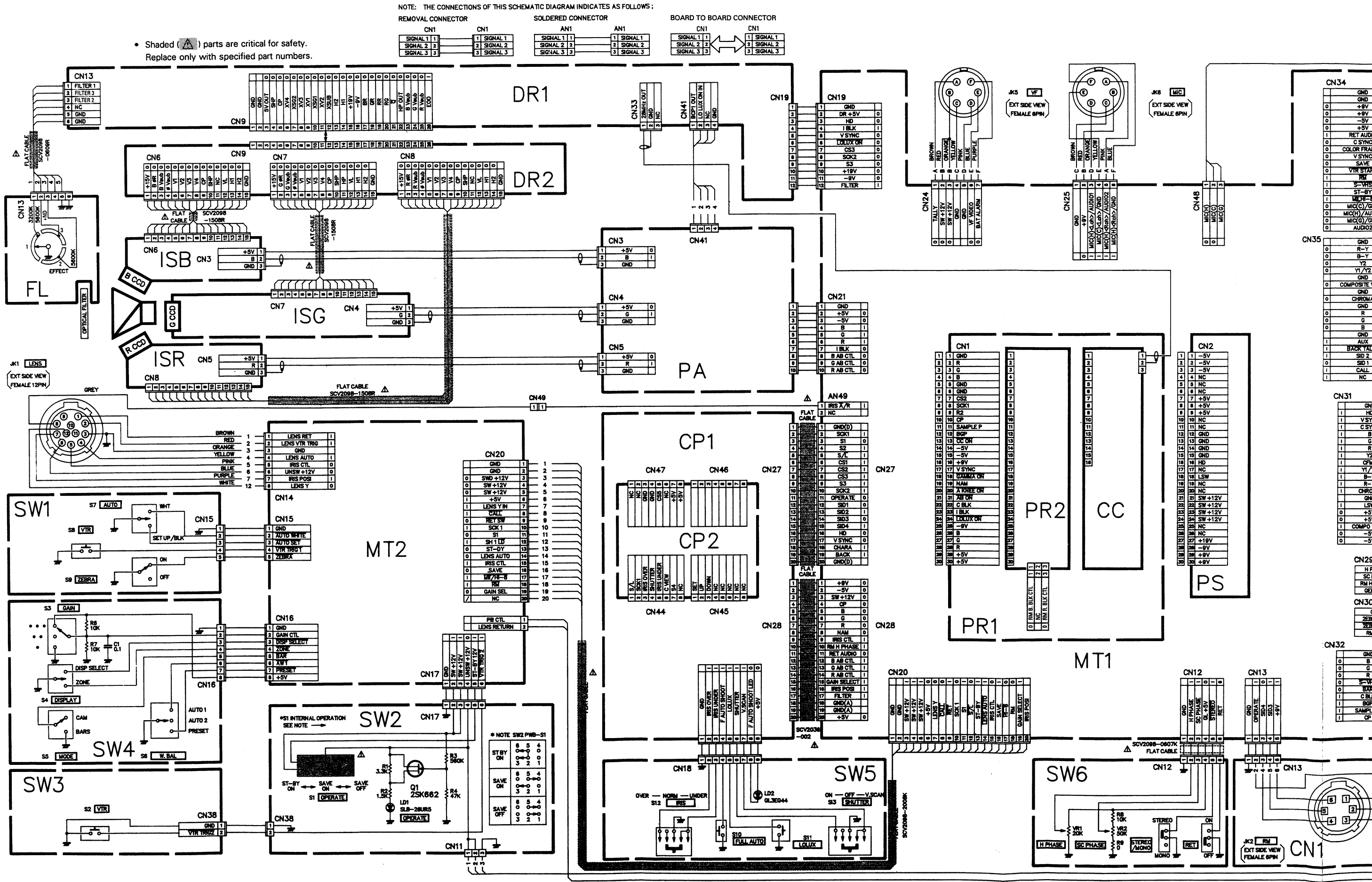
- Switch state detection
- Parallel-serial conversion



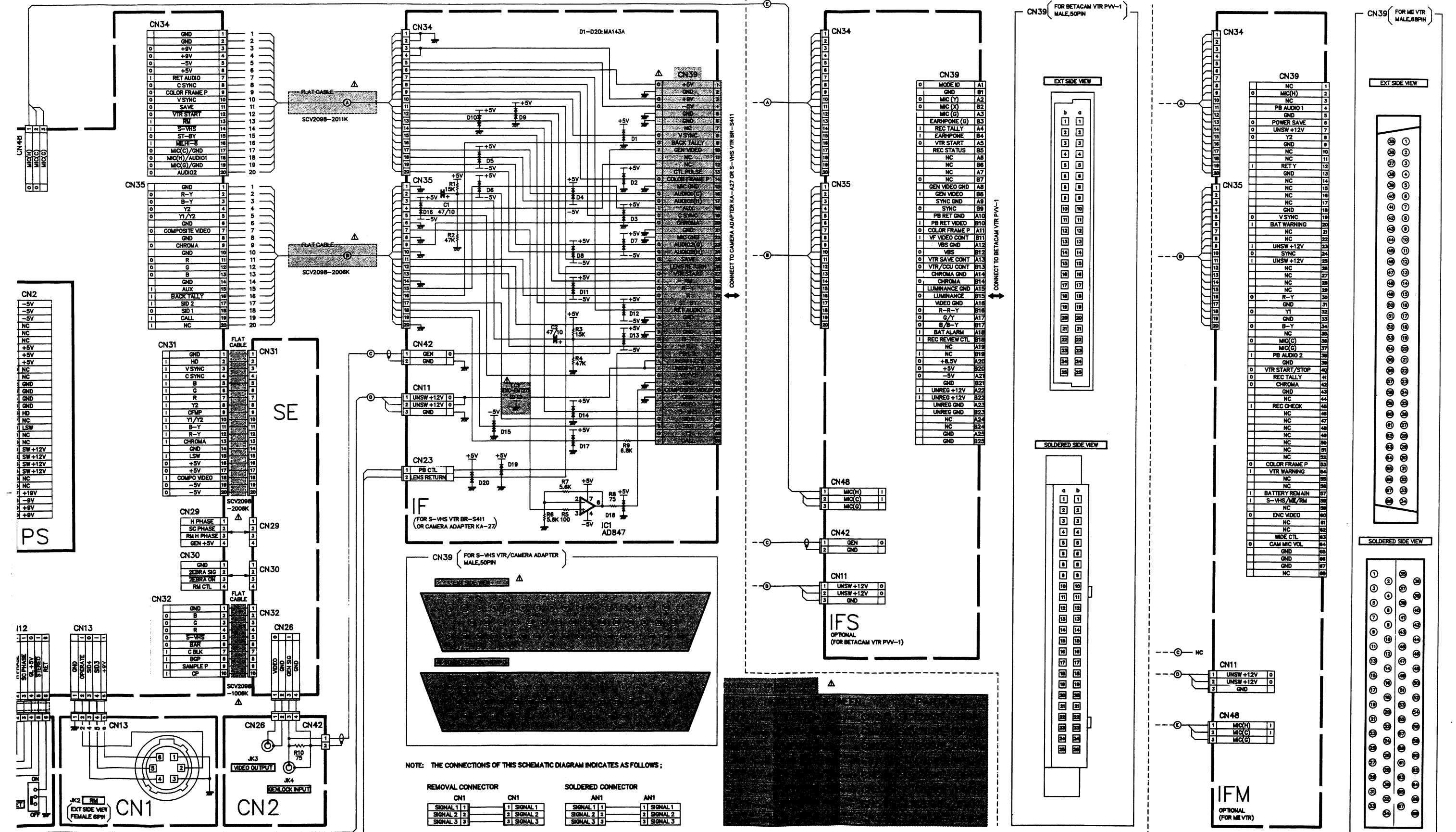
6.24 MT1 SCHEMATIC DIAGRAM 15



6.25 OVERALL WIRING DIAGRAM (Including schematic diagrams of SW1 to SW6, CN1, CN2 AND IFboards)

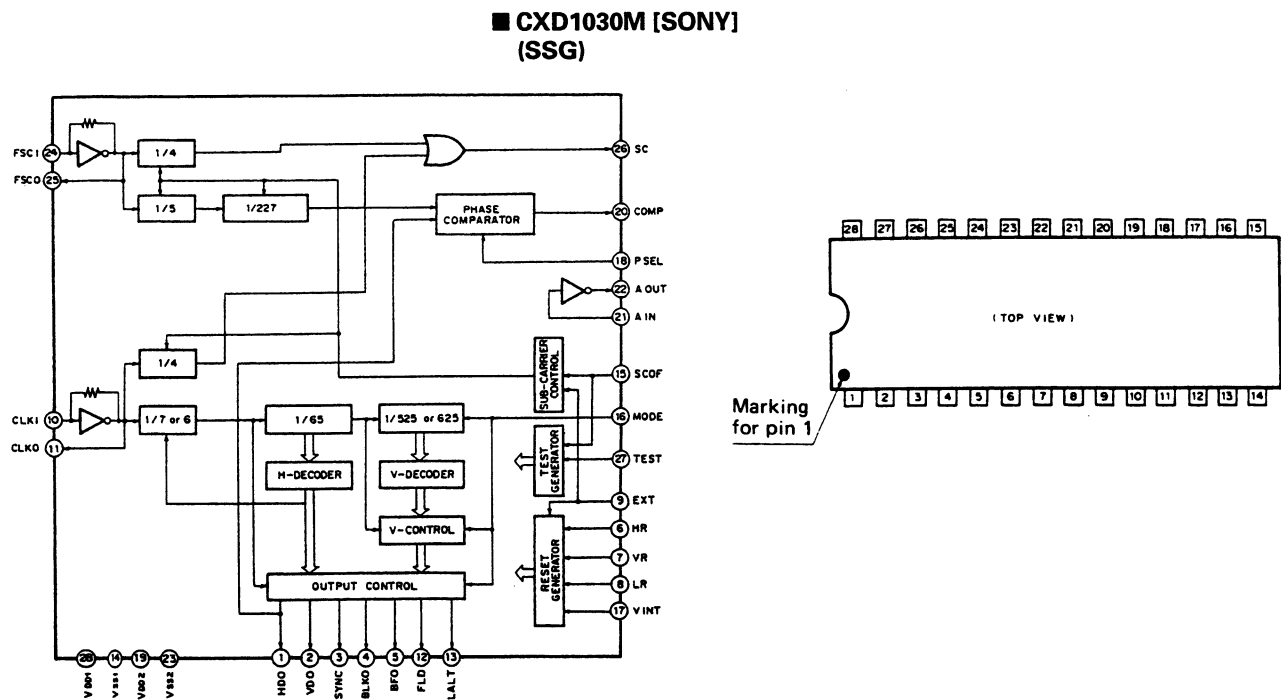


• IFS board and IFM board are built in the KA-P27/KK-M27 (optional).



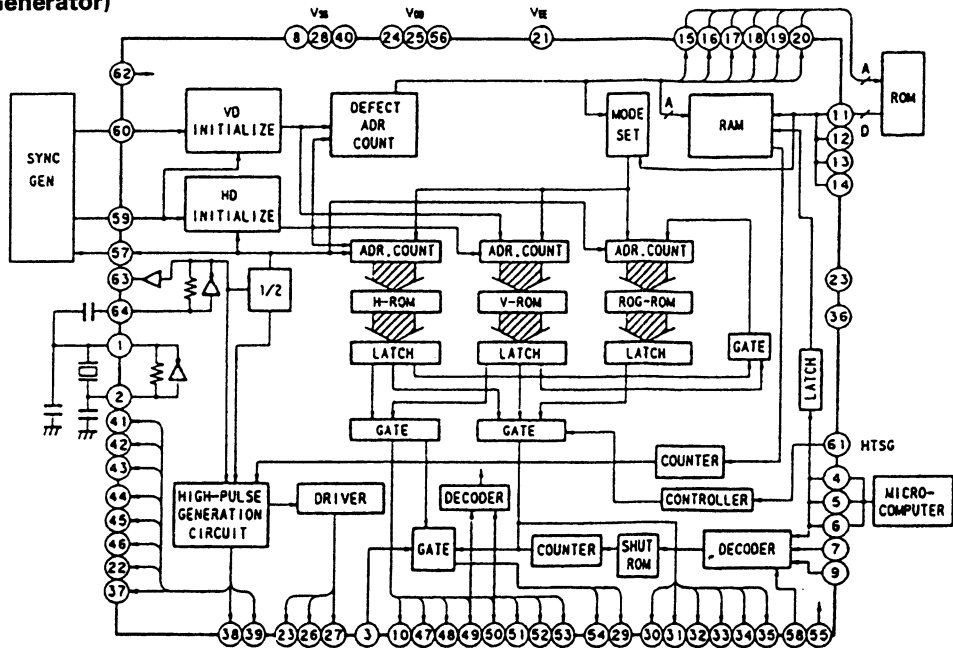
6.26 SCHEMATIC DIAGRAM of ICs

Note: Here are only the ICs that are exclusively used for the KY-19 appearing in this section.
For detail of other ICs used in the KY-19 and the KY-27 in common, refer to the service manuals (No. 60061 and No. 60072) for the KY-27.



Pin NO	NAME	I/O	FUNCTION
1	HDO	0	Horizontal Drive Pulse
2	VDO	0	Vertical Drive Pulse
3	SYNC	0	Composite Drive Pulse
4	BLKO	0	Composite Blanking
5	BFO	0	Burst Flag Pulse
6	HR	1	Horizontal Reset Pulse Input
7	VR	1	Vertical Reset Pulse Input
8	LR	1	Line Alturnate Pulse Input
9	EXT	1	mode Select
10	CLKI	1	Clock Input (NTSC:14.31818MHz, PAL:14.1875MHz)
11	CLKO	0	Clock Output
12	FLD	0	Field Pulse
13	LALT	0	Line Alturnate Pulse
14	VSS1	-	GND
15	SCOF	1	Subcarrier Output Control (L:OFF)
16	MODE	1	TV Mode Select (L:NTSC/H:PAL)
17	VINT	1	Intiarize Input
18	PSEL	1	Phase Comparetor Polarity Select
19	VDD2	-	+5V
20	COMP	0	Phase Comparator Output
21	AIN	1	Invertor Input
22	AOUT	0	Invertor Output
23	VSS2	-	GND(Invertor)
24	FSCI	1	4fsc Clock Input
25	FSCO	0	4fsc Clock Output
26	SC	0	Subcarrier Output
27	TEST	1	Test Input
28	VDD1	-	+5v

■ CXD1265R [SONY]
(Timing Pulse Generator)



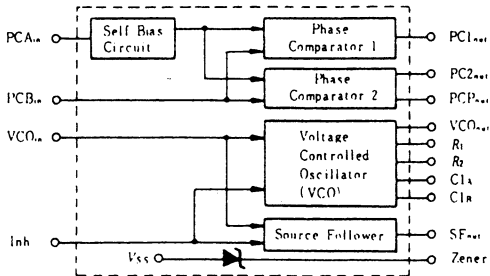
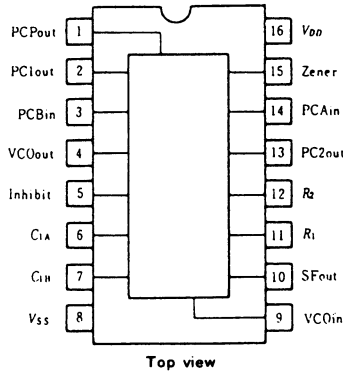
● Pin functions

Pin No.	Symbol	I/O	Description
1	OSCO	O	Inverter output for oscillation
2	OSCI	I	Inverter input for oscillation
3	EF	I	Defect compensation data input switching (with pull-up resistor) H : Use of external ROM, L : Serial input from microcomputer
4	ED0	I	Shutter speed setting. Strobe input in serial mode (with pull-up resistor)
5	ED1	I	Shutter speed setting. Clock input in serial mode (with pull-up resistor)
6	ED2	I	Shutter speed setting. Data input in serial mode (with pull-up resistor)
7	SMD1	I	Shutter mode setting (with pull-up resistor)
8	Vss	—	GND
9	SMD2	I	Shutter mode setting (with pull-up resistor)
10	XVCT	O	Power control for external ROM
11	D1	I	Data input when external ROM is used (with pull-down resistor) When external ROM is not used; L : No defect compensation, H : Defect compensation
12	D2	I	Data input when external ROM is used (with pull-down resistor) When external ROM is not used; L : Color, H : B/W
13	D3	I	Data input when external ROM is used (with pull-down resistor) When external ROM is not used, fixed to Low.
14	D4	I	Data input when external ROM is used (with pull-down resistor) When external ROM is not used; L : NTSC, H : PAL
15	A5	O	Address output for external ROM
16	A4	O	Address output for external ROM
17	A3	O	Address output for external ROM
18	A0	O	Address output for external ROM
19	A1	O	Address output for external ROM
20	A2	O	Address output for external ROM
21	VEE	—	GND
22	RG	O	Reset gate pulse output
23	LH1	—	Clock output for the last CCD horizontal register
24	VDD	—	Power supply

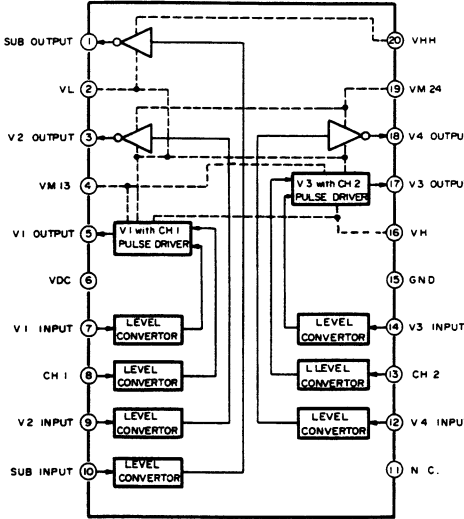
Pin No.	Symbol
25	VDD
26	H1
27	H2
28	Vss
29	XSUB
30	XV2
31	XV1
32	XSG1
33	XV3
34	XSG2
35	XV4
36	TEST2
37	CLD
38	XSHP
39	XSHD
40	Vss
41	XSP1
42	XSP2
43	XSH1/ SHP
44	XSH2 SHD
45	XDL1
46	XDL2
47	BFG
48	CLP1
49	CLP2
50	CLP3
51	CLP4
52	PBLK
53	ID
54	WEN
55	GM
56	VDD
57	CL
58	PS
59	HD
60	VD
61	HTSG
62	TEST
63	XCK
64	CK

Pin No.	Symbol	I/O	Description
25	VDD	—	Power supply (for H1, H2)
26	H1	O	CCD horizontal register drive clock output
27	H2	O	CCD horizontal register drive clock output
28	VSS	—	GND (for H1, H2)
29	XSUB	O	CCD charge draining pulse output
30	XV2	O	CCD vertical register drive clock output
31	XV1	O	CCD vertical register drive clock output
32	XSG1	O	CCD sensor charge readout pulse output
33	XV3	O	CCD vertical register drive clock output
34	XSG2	O	CCD sensor charge readout pulse output
35	XV4	O	CCD vertical register drive clock output
36	TEST2	I	Test input. Usually Low.
37	CLD	O	4 fsc clock output
38	XSHP	O	Precharge level sample holding pulse
39	XSHD	O	Data sample holding pulse
40	VSS	—	GND
41	XSP1	O	Color separation sample holding pulse. No operation in B/W mopde.
42	XSP2	O	Color separation sample holding pulse. No operation in B/W mopde.
43	XSH1/ SHP	O	Switchover sample holding pulse/ Precharge level sample holding pulse (in B/W mode)
44	XSH2 SHD	O	Switchover sample holding pulse/ Data sample holding pulse (in B/W mode)
45	XDL1	O	Delay line clock output. No operation in B/W mode.
46	XDL2	O	Delay line clock output. No operation in B/W mode.
47	BFG	O	Pulse output for encoder, chroma modulator When GM is H, defect position indication pulse output. No operation in B/W mode.
48	CLP1	O	Clamping pulse output
49	CLP2	IO	Clamping pulse output. When GM is H, standby mode switching input.
50	CLP3	IO	Clamping pulse output. When GM is H, standby mode switching input.
51	CLP4	O	Clamping pulse output
52	PBLK	O	Blanking cleaning pulse output
53	ID	O	Line identification output. No operation in B/W mode.
54	WEN	O	Write enable output (only at slow shutter speed)
55	GM	I	L : Analog signal processing, H : Digital signal processing (with pull-down resistor)
56	VDD	—	Power supply
57	CL	O	4 fsc clock output
58	PS	I	Electronic shutter speed input way switching (with pull-up resistor) L : Serial input, H : Parallel input
59	HD	I	Horizontal sync signal input
60	VD	I	Vertical sync signal input (Low period is 9H in NTSC/EIA or 7.5H in PAL/CCIR.)
61	HTSG	I	XSG1, XSG2 control input (with pull-up resistor) L : No XSG1, XSG2 output, H : XSG1, XSG2 output
62	TEST	I	Test input. Usually Low (with pull-down resistor)
63	XCK	O	8 fsc clock output
64	CK	I	8 fsc clock input

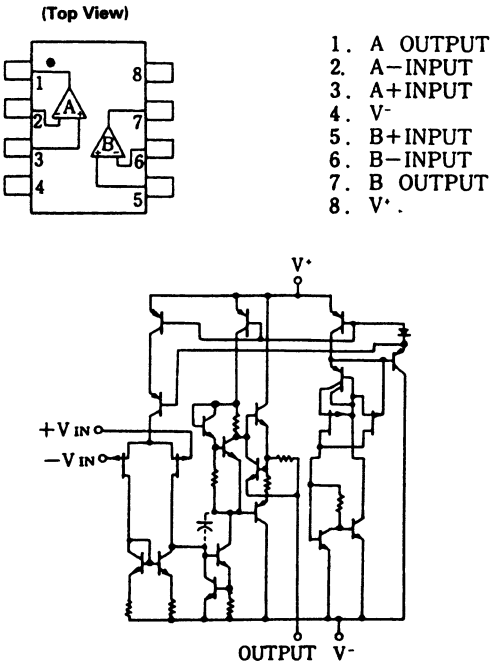
■ MC14046BF [MOTOROLA] (Phase Comparator)



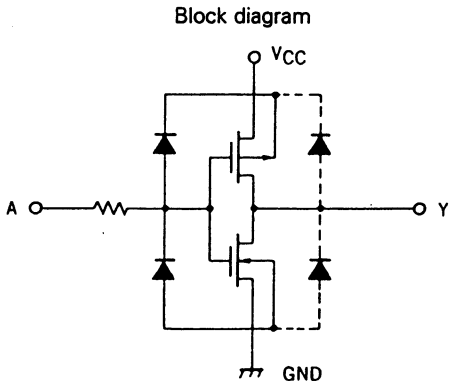
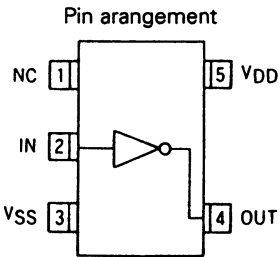
■ MN3110SA [MATSUSHITA] (V-CCD Driver)



■ JM062M [JRC] (Op. Amplifier)



■ TC7SU04F [TOSHIBA] (Inverter)



SECTION 7 ELECTRICAL PARTS LIST

SAFETY PRECAUTION:

Parts identified by the Δ symbol are critical for safety. Replace only with specified parts numbers.
For maximum reliability and performance, all other replacement parts should be identical to those specified.

NOTE:

- Parts not denoted by parts numbers are not supplied by JVC.
- Abbreviations in this list are as follows:

RESISTORS

In the "Description" column:

All resistance values are in ohms (Ω).
K expresses kilo-ohm (1 000 ohms, k Ω).
M expresses mega-ohm (10^6 ohms, M Ω).

In the "Parts Name" column:

COMP. RESISTOR : Composition Resistor
U.F. RESISTOR : Non-inflammable Resistor
O.M.F. RESISTOR : Oxide Metalized Film Resistor
FUSI. RESISTOR : Fusible Resistor
M.P. RESISTOR : Metal Plate Resistor
M.G. RESISTOR : Metal Graze Resistor
M.F. RESISTOR : Metal Film Resistor
W.W. RESISTOR : Wire Wound Resistor

CAPACITORS

In the "Description" column:

All capacitance values are in microfarad (μ F) unless otherwise indicated.
P expresses picofarad (10^{-12} farad, pF).

In the "Parts Name" column:

TRIM. CAPACITOR : Trimmer Capacitor
CER. CAPACITOR : Ceramic Capacitor
E. CAPACITOR : Electrolytic Capacitor
TAN. CAPACITOR : Tantalum Capacitor
MPP CAPACITOR : Metalized Polypropylene Capacitor
O.F. CAPACITOR : Oil Film Capacitor
MPF CAPACITOR : Metalized Polyfilm Capacitor
F.M. CAPACITOR : Film Mica Capacitor
P.P. CAPACITOR : Polypropylene Capacitor
P.S. CAPACITOR : Polystyrene Capacitor

Note: In the "Description" column of the parts list, (U) means the parts for the U version while (E) is for the E Version.

Symbol No.	Part No.	Part Name	Description	
IC1	SCV1585-064	I.C.(M)	JVC	(U) ← for U version
	SCV1585-067	I.C.(M)	JVC	(E) ← for E version

NOTE

This section makes mention of the parts of only the following P.C. board assemblies that are different from those of the KY-27.

For the parts lists of P.C. board assemblies not appearing in this section, refer to the service manual for the KY-27 (Manual No. 60061 and No. 60072).

P.C. board assemblies appearing in this section

Section	Board name	Page
7.1	DR1 $\boxed{05}$	7-1
7.2	DR2 $\boxed{06}$	7-3
7.3	ISB $\boxed{01}$	7-4
7.4	ISG $\boxed{02}$	7-4
7.5	ISR $\boxed{03}$	7-5
7.6	PA $\boxed{04}$	7-5
7.7	PR1 $\boxed{07}$	7-7
7.8	PR2* $\boxed{08}$	7-10
7.9	CP1 $\boxed{11}$	7-13

*Nevertheless the same PR2 board is incorporated in the KY-19 and the KY-27 in common, the reason why the PR2 board assembly list appears in this section is as follows.

Late products of the KY-27 have drastic changes in the matrix circuit, and the PR2 board assembly parts of them and the KY-19 are considerably different from the parts list appearing in the KY-27's service manuals issued previously.

7.1 DR1 board assembly list 05

SCK2367-01-N0A
SCK2367-01-P0A

05

Symbol No.	Part No.	Part Name	Description
IC1	MC74HC14AF	I.C.(M)	MOTOROLA
IC2	MC74HC74AF	I.C.(DIGI-MOS)	MOTOROLA
IC3	TC7SU04F	I.C.(DIGI-MOS)	TOSHIBA
IC4	MC74HC02AF	I.C.(DIGI-MOS)	MOTOROLA
IC5	MC74HC08AF	I.C.(M)	MOTOROLA
IC6	TC7SU04F	I.C.(DIGI-MOS)	TOSHIBA
IC7	TC7SU04F	I.C.(DIGI-MOS)	TOSHIBA
IC8	CXD1265R	M IC(DRY)	SONY
IC9	MC14046BF	I.C.(DIGI-MOS)	MOTOROLA
IC10	CXD1030M	I.C.(M)	SONY
D1	MA335	SI DIODE	MATSUSHITA
D2	MA335	SI DIODE	MATSUSHITA
D3	MA142WK	DIODE	MATSUSHITA
R1	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R2	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R3	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R4	NRSA02J-561	M.G.RESISTOR	560 1/10W
R5	NRSA02J-561	M.G.RESISTOR	560 1/10W
R6	NRSA02J-151	M.G.RESISTOR	150 1/10W
R7	NRSA02J-151	M.G.RESISTOR	150 1/10W
R8	NRSA02J-151	M.G.RESISTOR	150 1/10W
R9	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R10	NRSA02J-682	M.G.RESISTOR	6.8K 1/10W
R11	NRSA02J-563	M.G.RESISTOR	56K 1/10W
R13	NRSA02J-471	M.G.RESISTOR	470 1/10W
R14	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R15	NRSA02J-100	M.G.RESISTOR	10 1/10W
R16	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R17	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R18	NRSA02J-271	M.G.RESISTOR	270 1/10W
R19	NRSA02J-151	M.G.RESISTOR	150 1/10W
R20	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R21	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R22	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R23	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R24	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R25	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R28	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R29	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R30	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R31	NRSA02J-0R0	M.G.RESISTOR	0 1/10W(E)
R32	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R33	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R34	NRSA02J-0R0	M.G.RESISTOR	0 1/10W(U)
R35	NRSA02J-0R0	M.G.RESISTOR	0 1/10W(E)
R36	NRSA02J-563	M.G.RESISTOR	56K 1/10W
R37	NRSA02J-151	M.G.RESISTOR	150 1/10W
R38	NRSA02J-151	M.G.RESISTOR	150 1/10W
R39	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R40	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R41	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R42	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R43	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R44	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R45	NRSA02J-471	M.G.RESISTOR	470 1/10W

Symbol No.	Part No.	Part Name	Description
VR1	NVP1416-102	TRIM.RESISTOR	1K SHP
VR2	NVP1416-102	TRIM.RESISTOR	1K HP
VR3	NVP1416-501	V.RESISTOR	500 CP(U)
VR3	NVP1416-501	V.RESISTOR	500 CP(E)
VR4	NVP1416-503	TRIM.RESISTOR	50K B VRGL
VR5	NVP1416-503	TRIM.RESISTOR	50K G VRGL
VR6	NVP1416-503	TRIM.RESISTOR	50K R VRGL
VR7	NVP1416-203	TRIM.RESISTOR	20K B Vsμb
VR8	NVP1416-203	TRIM.RESISTOR	20K G Vsμb
VR9	NVP1416-203	TRIM.RESISTOR	20K R Vsμb
C1	NCB21EK-473	CER.CAPACITOR	0.047 25V
C2	NEA11AM-336	E.CAPACITOR	33 10V
C3	NCT03CH-100	CER.CAPACITOR	10P 50V
C4	NCB21EK-473	CER.CAPACITOR	0.047 25V
C5	NCB21EK-473	CER.CAPACITOR	0.047 25V
C6	NCT03CH-100	CER.CAPACITOR	10P 50V
C7	NCT03CH-100	CER.CAPACITOR	10P 50V
C8	NCT03CH-100	CER.CAPACITOR	10P 50V
C9	NCB21EK-473	CER.CAPACITOR	0.047 25V
C10	NCT03CH-100	CER.CAPACITOR	10P 50V
C11	NCB21EK-473	CER.CAPACITOR	0.047 25V
C12	NCT03CH-100	CER.CAPACITOR	10P 50V
C13	NEA11AM-336	E.CAPACITOR	33 10V
C14	NCB21EK-473	CER.CAPACITOR	0.047 25V
C15	NEA11AM-336	E.CAPACITOR	33 10V
C16	NCB21EK-473	CER.CAPACITOR	0.047 25V
C17	NEA11AM-336	E.CAPACITOR	33 10V
C18	NCB21EK-473	CER.CAPACITOR	0.047 25V
C19	NCT03CH-330	CER.CAPACITOR	33P 50V(E)
C20	NCT03CH-101	CER.CAPACITOR	100P 50V
C21	NCT03CH-101	CER.CAPACITOR	100P 50V
C22	NCB21HK-103	CER.CAPACITOR	0.010 50V
C23	NCB21EK-473	CER.CAPACITOR	0.047 25V
C24	NCB21EK-473	CER.CAPACITOR	0.047 25V
C25	NCB21EK-473	CER.CAPACITOR	0.047 25V
C26	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C27	NCB21EK-473	CER.CAPACITOR	0.047 25V
C28	NCB21HK-102	CER.CAPACITOR	1000P 50V
C29	NCB21EK-473	CER.CAPACITOR	0.047 25V
C30	NCB21EK-473	CER.CAPACITOR	0.047 25V
C31	NCT03CH-681	CER.CAPACITOR	680P 50V
C32	NCB21EK-473	CER.CAPACITOR	0.047 25V
C33	NCB21EK-473	CER.CAPACITOR	0.047 25V
C41	NEA11EM-106	E.CAPACITOR	10 25V
C42	NCB21EK-473	CER.CAPACITOR	0.047 25V
C43	NCT03CH-101	CER.CAPACITOR	100P 50V
L1	SSV1330-150	COIL	15μH
L2	SSV1330-150	COIL	15μH
L3	SSV1330-150	COIL	15μH
LC1	SCV1804-222	EMI FILTER	
X1	CE41081-A0A	CRYSTAL	28.636MHz (U)
X1	CE41212-001	CRYSTAL	28.375MHz (E)

Symbol No.	Part No.	Part Name	Description
CN9	SCV1814-026	CONNECTOR	26 PIN
CN13	SSV1321-006	CONNECTOR	6 PIN
CN19	SCV1770-012	CONNECTOR	12 PIN
CN33	SCV1770-003	CONNECTOR	3 PIN
CN41	SCV1770-004	CONNECTOR	4 PIN
TP1	SCV1880-001	TEST POINT	

Symbol No.	Part No.	Part Name	Description
R19	NRSA02J-100	M.G.RESISTOR	10 1/10W
R20	NRSA02J-100	M.G.RESISTOR	10 1/10W
R21	NRSA02J-100	M.G.RESISTOR	10 1/10W
R22	NRSA02J-151	M.G.RESISTOR	150 1/10W
VR1	NVP1415-203	TRIM.RESISTOR	20K Eoo
C1	NEA11EM-106	E.CAPACITOR	10 25V
C2	NEA11EM-106	E.CAPACITOR	10 25V
C3	NCB21EK-473	CER.CAPACITOR	0.047 25V
C4	NCB21EK-473	CER.CAPACITOR	0.047 25V
C5	NEA11CM-226	E.CAPACITOR	22 16V
C6	NEA11AM-336	E.CAPACITOR	33 10V
C7	NCB21EK-473	CER.CAPACITOR	0.047 25V
C8	NCB21HK-103	CER.CAPACITOR	0.010 50V
C9	NCB21EK-473	CER.CAPACITOR	0.047 25V
C10	NCB21HK-103	CER.CAPACITOR	0.010 50V
C11	NCB21EK-473	CER.CAPACITOR	0.047 25V
C12	NCB21HK-103	CER.CAPACITOR	0.010 50V
C13	NCB21EK-473	CER.CAPACITOR	0.047 25V
C14	NCB21EK-473	CER.CAPACITOR	0.047 25V
C15	NEA11EM-106	E.CAPACITOR	10 25V
C16	NCB21EK-473	CER.CAPACITOR	0.047 25V
C17	NEA11EM-106	E.CAPACITOR	10 25V
C18	NCB21EK-473	CER.CAPACITOR	0.047 25V
C19	NEA11EM-106	E.CAPACITOR	10 25V
C20	NCB21EK-473	CER.CAPACITOR	0.047 25V
C21	NEA11AM-336	E.CAPACITOR	33 10V
C22	NCB21EK-473	CER.CAPACITOR	0.047 25V
C23	NCB21EK-473	CER.CAPACITOR	0.047 25V
C24	NCB21EK-473	CER.CAPACITOR	0.047 25V
C25	NCB21EK-473	CER.CAPACITOR	0.047 25V
C26	NCB21EK-473	CER.CAPACITOR	0.047 25V
C27	NCB21EK-473	CER.CAPACITOR	0.047 25V
C28	NCB21EK-473	CER.CAPACITOR	0.047 25V
C29	NCB21EK-473	CER.CAPACITOR	0.047 25V
C30	NCB21EK-473	CER.CAPACITOR	0.047 25V
C31	NCB21EK-473	CER.CAPACITOR	0.047 25V
C32	NCB21EK-473	CER.CAPACITOR	0.047 25V
C33	NCB21EK-473	CER.CAPACITOR	0.047 25V
C34	NCB21EK-473	CER.CAPACITOR	0.047 25V
C35	NCB21EK-473	CER.CAPACITOR	0.047 25V
C36	NEA10JM-337	E.CAPACITOR	330 6.3V
C37	NEA10JM-337	E.CAPACITOR	330 6.3V
C38	NCB21EK-473	CER.CAPACITOR	0.047 25V
C39	NEA10JM-107	E.CAPACITOR	100 6.3V
C40	NCB21EK-473	CER.CAPACITOR	0.047 25V
C41	NEA11CM-226	E.CAPACITOR	22 16V
C42	NEF11AM-225	TAN.CAPACITOR	2.2 10V
C43	NEF11AM-225	TAN.CAPACITOR	2.2 10V
C44	NEF11AM-225	TAN.CAPACITOR	2.2 10V
L1	SSV1330-150	COIL	15μH
CN6	SSV1321-015	CONNECTOR	15 PIN
CN7	SSV1321-015	CONNECTOR	15 PIN
CN8	SSV1321-015	CONNECTOR	15 PIN
CN9	SCV1815-026	CONNECTOR	26 PIN

7.2 DR2 board assembly list 06

<SCK2367-02-00A>

06

Symbol No.	Part No.	Part Name	Description
IC1	RC78L15UA	I.C.(MONO-ANA)	RAYTHEON
IC2	MC74HC08AF	I.C.(M)	MOTOROLA
IC3	MN3110SA	I.C.(M)	MATSUSHITA
IC4	MN3110SA	I.C.(M)	MATSUSHITA
IC5	MN3110SA	I.C.(M)	MATSUSHITA
IC6	TC74HCU04AF	IC	TOSHIBA
IC7	TC74HCU04AF	IC	TOSHIBA
IC8	TC74HCU04AF	IC	TOSHIBA
Q1	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q2	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q3	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q4	2SD1820(QR)	TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
D2	MA142A	DIODE	MATSUSHITA
D3	MA142A	DIODE	MATSUSHITA
D4	MA142A	DIODE	MATSUSHITA
R1	NRSA02J-681	M.G.RESISTOR	680 1/10W
R2	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R3	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R4	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R5	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R6	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R7	NRSA02J-330	M.G.RESISTOR	33 1/10W
R8	NRSA02J-330	M.G.RESISTOR	33 1/10W
R9	NRSA02J-330	M.G.RESISTOR	33 1/10W
R10	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R11	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R12	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R13	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R14	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R15	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R16	NRSA02J-100	M.G.RESISTOR	10 1/10W
R17	NRSA02J-100	M.G.RESISTOR	10 1/10W
R18	NRSA02J-100	M.G.RESISTOR	10 1/10W

7.3 ISB board assembly list 01
<SCK2367-03-00A>
01

Symbol No.	Part No.	Part Name	Description
Q1	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q2	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q3	3SK157	F.E.T.	NEC
Q4	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q5	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q6	3SK157	F.E.T.	NEC
Q7	2SA1622(M6)	TRANSISTOR	SANYO
Q8	2SC3930(BC)	TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
R1	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R2	NRSA02J-391	M.G.RESISTOR	390 1/10W
R3	NRSA02J-184	M.G.RESISTOR	180K 1/10W
R4	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R5	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R6	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R7	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R8	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R9	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R10	NRSA02J-101	M.G.RESISTOR	100 1/10W
R11	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R12	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R13	NRSA02J-221	M.G.RESISTOR	220 1/10W
R14	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R15	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R16	NRSA02J-221	M.G.RESISTOR	220 1/10W
R17	NRSA02J-152	M.G.RESISTOR	1.5K 1/10W
R18	NRSA02J-100	M.G.RESISTOR	10 1/10W
C1	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C2	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C3	NCB21EK-473	CER.CAPACITOR	0.047 25V
C4	NCB21EK-473	CER.CAPACITOR	0.047 25V
C5	NCB21EK-473	CER.CAPACITOR	0.047 25V
C6	NEA10GM-476	E.CAPACITOR	47 4V
C7	NEF11AM-225	TAN.CAPACITOR	2.2 10V
C8	NEF11AM-156	TAN.CAPACITOR	15 10V
C9	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C10	NCT03CH-101	CER.CAPACITOR	100P 50V
C11	NEF10GM-106	TAN.CAPACITOR	10 4V
C12	NCT03CH-560	CER.CAPACITOR	56P 50V
CN3	SCV1770-003	CONNECTOR	3 PIN
CN6	SSV1321-015	CONNECTOR	15 PIN

7.4 ISG board assembly list 02
<SCK2367-04-00A>
02

Symbol No.	Part No.	Part Name	Description
Q1	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q2	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q3	3SK157	F.E.T.	NEC
Q4	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q5	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q6	3SK157	F.E.T.	NEC
Q7	2SA1622(M6)	TRANSISTOR	SANYO
Q8	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q9	3SK157	F.E.T.	NEC
Q10	2SA1622(M6)	TRANSISTOR	SANYO
Q11	2SC3930(BC)	TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
R1	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R2	NRSA02J-391	M.G.RESISTOR	390 1/10W
R3	NRSA02J-184	M.G.RESISTOR	180K 1/10W
R4	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R5	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R6	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R7	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R8	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R9	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R10	NRSA02J-101	M.G.RESISTOR	100 1/10W
R11	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R12	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R13	NRSA02J-221	M.G.RESISTOR	220 1/10W
R14	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R15	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R16	NRSA02J-221	M.G.RESISTOR	220 1/10W
R17	NRSA02J-152	M.G.RESISTOR	1.5K 1/10W
R18	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R19	NRSA02J-221	M.G.RESISTOR	220 1/10W
R20	NRSA02J-152	M.G.RESISTOR	1.5K 1/10W
R21	NRSA02J-100	M.G.RESISTOR	10 1/10W
C1	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C2	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C3	NCB21EK-473	CER.CAPACITOR	0.047 25V
C4	NCB21EK-473	CER.CAPACITOR	0.047 25V
C5	NCB21EK-473	CER.CAPACITOR	0.047 25V
C6	NEA10GM-476	E.CAPACITOR	47 4V
C7	NEF11AM-225	TAN.CAPACITOR	2.2 10V
C8	NEF11AM-156	TAN.CAPACITOR	15 10V
C9	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C10	NCT03CH-101	CER.CAPACITOR	100P 50V
C11	NEF10GM-106	TAN.CAPACITOR	10 4V
C12	NCT03CH-560	CER.CAPACITOR	56P 50V
C13	NCT03CH-330	CER.CAPACITOR	33P 50V
CN4	SCV1770-003	CONNECTOR	3 PIN
CN7	SSV1321-015	CONNECTOR	15 PIN

7.5 ISR board assembly list 03
<SCK2367-05-00A>
03

Symbol No.	Part No.	Part Name	Description
Q1	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q2	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q3	3SK157	F.E.T.	NEC
Q4	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q5	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q6	3SK157	F.E.T.	NEC
Q7	2SA1622(M6)	TRANSISTOR	SANYO
Q8	2SC3930(BC)	TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
R1	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R2	NRSA02J-391	M.G.RESISTOR	390 1/10W
R3	NRSA02J-184	M.G.RESISTOR	180K 1/10W
R4	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R5	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R6	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R7	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R8	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R9	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R10	NRSA02J-101	M.G.RESISTOR	100 1/10W
R11	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R12	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R13	NRSA02J-221	M.G.RESISTOR	220 1/10W
R14	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R15	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R16	NRSA02J-221	M.G.RESISTOR	220 1/10W
R17	NRSA02J-152	M.G.RESISTOR	1.5K 1/10W
R18	NRSA02J-100	M.G.RESISTOR	10 1/10W
C1	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C2	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C3	NCB21EK-473	CER.CAPACITOR	0.047 25V
C4	NCB21EK-473	CER.CAPACITOR	0.047 25V
C5	NCB21EK-473	CER.CAPACITOR	0.047 25V
C6	NEA10GM-476	E.CAPACITOR	47 4V
C7	NEF11AM-225	TAN.CAPACITOR	2.2 10V
C8	NEF11AM-156	TAN.CAPACITOR	15 10V
C9	NEF11VM-105	TAN.CAPACITOR	1.0 35V
C10	NCT03CH-101	CER.CAPACITOR	100P 50V
C11	NEF10GM-106	TAN.CAPACITOR	10 4V
C12	NCT03CH-560	CER.CAPACITOR	56P 50V
CN5	SCV1770-003	CONNECTOR	3 PIN
CN8	SSV1321-015	CONNECTOR	15 PIN

7.6 PA board assembly list 04
<SCK2367-06-00A>
04

Symbol No.	Part No.	Part Name	Description
IC1	NJM062M	I.C.(M)	JRC
IC2	NJM062M	I.C.(M)	JRC
IC3	NJM062M	I.C.(M)	JRC
IC4	MC74HC4053F	I.C.(M)	MOTOROLA
IC5	TC4S69F	I.C.(M)	TOSHIBA
IC6	TC4S69F	I.C.(M)	TOSHIBA
Q1	2SK662(QR)	FET	MATSUSHITA
Q2	2SC3932(ST)	TRANSISTOR	MATSUSHITA
Q3	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q4	2SK662(QR)	FET	MATSUSHITA
Q5	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q6	2SK662(QR)	FET	MATSUSHITA
Q7	2SC3932(ST)	TRANSISTOR	MATSUSHITA
Q8	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q9	2SK662(QR)	FET	MATSUSHITA
Q10	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q11	2SK662(QR)	FET	MATSUSHITA
Q12	2SC3932(ST)	TRANSISTOR	MATSUSHITA
Q13	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q14	2SK662(QR)	FET	MATSUSHITA
Q15	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q16	2SK662(QR)	FET	MATSUSHITA
Q17	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q18	2SK662(QR)	FET	MATSUSHITA
Q19	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q20	2SK662(QR)	FET	MATSUSHITA
Q21	2SC3930(BC)	TRANSISTOR	MATSUSHITA
R2	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R3	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R4	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R5	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R6	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R7	NRSA02J-681	M.G.RESISTOR	680 1/10W
R8	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R9	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R10	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R11	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R12	NRSA02J-101	M.G.RESISTOR	100 1/10W
R13	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R14	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R15	NRSA02J-564	M.G.RESISTOR	560K 1/10W
R16	NRSA02J-564	M.G.RESISTOR	560K 1/10W
R18	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R19	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R20	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R21	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R22	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R23	NRSA02J-822	M.G.RESISTOR	8.2K 1/10W
R24	NRSA02J-681	M.G.RESISTOR	680 1/10W
R25	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R26	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R27	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R28	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R29	NRSA02J-101	M.G.RESISTOR	100 1/10W
R30	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R32	NRSA02J-564	M.G.RESISTOR	560K 1/10W
R33	NRSA02J-564	M.G.RESISTOR	560K 1/10W

[PA]

Symbol No.	Part No.	Part Name	Description	
R35	NRSA02J-333	M.G.RESISTOR	33K	1/10W
R36	NRSA02J-102	M.G.RESISTOR	1.0K	1/10W
R37	NRSA02J-102	M.G.RESISTOR	1.0K	1/10W
R38	NRSA02J-472	M.G.RESISTOR	4.7K	1/10W
R39	NRSA02J-472	M.G.RESISTOR	4.7K	1/10W
R40	NRSA02J-822	M.G.RESISTOR	8.2K	1/10W
R41	NRSA02J-681	M.G.RESISTOR	680	1/10W
R42	NRSA02J-222	M.G.RESISTOR	2.2K	1/10W
R43	NRSA02J-392	M.G.RESISTOR	3.9K	1/10W
R44	NRSA02J-333	M.G.RESISTOR	33K	1/10W
R45	NRSA02J-473	M.G.RESISTOR	47K	1/10W
R46	NRSA02J-101	M.G.RESISTOR	100	1/10W
R47	NRSA02J-0R0	M.G.RESISTOR	0	1/10W
R48	NRSA02J-392	M.G.RESISTOR	3.9K	1/10W
R49	NRSA02J-564	M.G.RESISTOR	560K	1/10W
R50	NRSA02J-564	M.G.RESISTOR	560K	1/10W
R51	NRSA02J-0R0	M.G.RESISTOR	0	1/10W
R52	NRSA02J-101	M.G.RESISTOR	100	1/10W
R53	NRSA02J-101	M.G.RESISTOR	100	1/10W
R54	NRSA02J-101	M.G.RESISTOR	100	1/10W
R55	NRSA02J-183	M.G.RESISTOR	18K	1/10W
R56	NRSA02J-102	M.G.RESISTOR	1.0K	1/10W
R57	NRSA02J-683	M.G.RESISTOR	68K	1/10W
R58	NRSA02J-333	M.G.RESISTOR	33K	1/10W
R59	NRSA02J-392	M.G.RESISTOR	3.9K	1/10W
R60	NRSA02J-102	M.G.RESISTOR	1.0K	1/10W
R61	NRSA02J-683	M.G.RESISTOR	68K	1/10W
R62	NRSA02J-333	M.G.RESISTOR	33K	1/10W
R63	NRSA02J-392	M.G.RESISTOR	3.9K	1/10W
R64	NRSA02J-102	M.G.RESISTOR	1.0K	1/10W
R65	NRSA02J-683	M.G.RESISTOR	68K	1/10W
R66	NRSA02J-333	M.G.RESISTOR	33K	1/10W
R67	NRSA02J-392	M.G.RESISTOR	3.9K	1/10W
VR1	NVP1416-503	TRIM.RESISTOR	50K	B BLACK
VR2	NVP1416-503	TRIM.RESISTOR	50K	G BLACK
VR3	NVP1416-503	TRIM.RESISTOR	50K	R BLACK
C1	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C2	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C3	NCT03CH-220	CER.CAPACITOR	22P	50V
C4	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C5	NEN11HM-105	E.CAPACITOR	1.0	50V
C6	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C7	NEN11HM-105	E.CAPACITOR	1.0	50V
C8	NCT03CH-470	CER.CAPACITOR	47P	50V
C9	NCT03CH-330	CER.CAPACITOR	33P	50V
C10	NEA11AM-336	E.CAPACITOR	33	10V
C11	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C12	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C13	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C14	NCT03CH-220	CER.CAPACITOR	22P	50V
C15	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C16	NEN11HM-105	E.CAPACITOR	1.0	50V
C17	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C18	NEN11HM-105	E.CAPACITOR	1.0	50V
C19	NCT03CH-470	CER.CAPACITOR	47P	50V
C20	NCT03CH-330	CER.CAPACITOR	33P	50V

Symbol No.	Part No.	Part Name	Description	
C21	NEA11AM-336	E.CAPACITOR	33	10V
C22	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C23	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C24	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C25	NCT03CH-220	CER.CAPACITOR	22P	50V
C26	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C27	NEN11HM-105	E.CAPACITOR	1.0	50V
C28	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C29	NEN11HM-105	E.CAPACITOR	1.0	50V
C30	NCT03CH-470	CER.CAPACITOR	47P	50V
C31	NCT03CH-330	CER.CAPACITOR	33P	50V
C32	NEA11AM-336	E.CAPACITOR	33	10V
C33	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C34	NEA10JM-337	E.CAPACITOR	330	6.3V
C35	NEA10JM-107	E.CAPACITOR	100	6.3V
C36	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C37	NEA10JM-107	E.CAPACITOR	100	6.3V
C38	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C39	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C40	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C41	NCF21EZ-104	CER.CAPACITOR	0.10	25V
LC1	SCV1859-001	LOWPASS FILTER	10 MHz	
LC2	SCV1859-001	LOWPASS FILTER	10 MHz	
LC3	SCV1859-001	LOWPASS FILTER	10 MHz	
LC4	SCV2366-001	TRAP(7.16M)	7.16 MHz	
LC5	SCV2366-001	TRAP(7.16M)	7.16 MHz	
LC6	SCV2366-001	TRAP(7.16M)	7.16 MHz	
CN3	SCV1770-003	CONNECTOR	3 PIN	
CN4	SCV1770-003	CONNECTOR	3 PIN	
CN5	SCV1770-003	CONNECTOR	3 PIN	
CN21	SCV1770-010	CONNECTOR	10 PIN	
CN41	SCV1770-004	CONNECTOR	4 PIN	

7.7 PR1 board assembly list 07

<SCK2307-03-01B>

07

Symbol No.	Part No.	Part Name	Description
IC1	NJM062M	I.C.(M)	JRC
IC2	NJM062M	I.C.(M)	JRC
IC3	NJM1496M	I.C.(M)	JRC
IC4	NJM062M	I.C.(M)	JRC
IC5	NJM062M	I.C.(M)	JRC
IC6	NJM062M	I.C.(M)	JRC
IC7	NJM1496M	I.C.(M)	JRC
IC8	NJM062M	I.C.(M)	JRC
IC9	NJM062M	I.C.(M)	JRC
IC10	NJM062M	I.C.(M)	JRC
IC11	NJM1496M	I.C.(M)	JRC
IC12	NJM062M	I.C.(M)	JRC
IC13	NJM2902M	I.C.(MONO-ANA)	JRC
IC14	MB88342PF	I.C.(M)	FUJITSU
IC16	NJM062M	I.C.(M)	JRC
Q2	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q3	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q4	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q5	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q6	2SK662(QR)	FET	MATSUSHITA
Q7	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q8	CXD7500M	F.E.T.	SONY
Q9	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q11	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q12	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q13	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q14	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q15	2SK662(QR)	FET	MATSUSHITA
Q16	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q17	CXD7500M	F.E.T.	SONY
Q18	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q20	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q21	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q22	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q23	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q24	2SK662(QR)	FET	MATSUSHITA
Q25	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q26	CXD7500M	F.E.T.	SONY
Q27	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q33	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q34	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q35	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q36	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q37	2SK662(QR)	FET	MATSUSHITA
Q38	2SK662(QR)	FET	MATSUSHITA
Q39	2SK662(QR)	FET	MATSUSHITA
Q40	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q41	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q42	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q43	2SA1622(M6)	TRANSISTOR	SANYO
Q44	2SA1622(M6)	TRANSISTOR	SANYO
Q45	2SA1622(M6)	TRANSISTOR	SANYO
Q46	2SC3930(BC)	TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
D2	MA142A	DIODE	MATSUSHITA
D3	MA142A	DIODE	MATSUSHITA

Symbol No.	Part No.	Part Name	Description
R1	NRSA02J-330	M.G.RESISTOR	33 1/10W
R2	NRSA02J-471	M.G.RESISTOR	470 1/10W
R4	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R5	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R6	NRSA02J-101	M.G.RESISTOR	100 1/10W
R7	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R8	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R9	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R10	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R11	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R12	NRSA02J-471	M.G.RESISTOR	470 1/10W
R13	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R14	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R15	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R16	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R17	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R19	NRVA02D-3301	M.F.RESISTOR	3.30K 1/10W
R20	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R21	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R22	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R23	NRSA02J-393	M.G.RESISTOR	39K 1/10W
R24	NRSA02J-101	M.G.RESISTOR	100 1/10W
R25	NRSA02J-101	M.G.RESISTOR	100 1/10W
R26	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R27	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R28	NRSA02J-221	M.G.RESISTOR	220 1/10W
R29	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R30	NRSA02J-823	M.G.RESISTOR	82K 1/10W
R31	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R32	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R33	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R34	NRSA02J-101	M.G.RESISTOR	100 1/10W
R35	NRVA02D-3302	M.F.RESISTOR	33.0K 1/10W
R36	NRVA02D-1802	M.F.RESISTOR	18.0K 1/10W
R39	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R40	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R41	NRSA02J-101	M.G.RESISTOR	100 1/10W
R42	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R43	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R44	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R45	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R46	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R47	NRSA02J-471	M.G.RESISTOR	470 1/10W
R48	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R49	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R50	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R51	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R52	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R54	NRVA02D-3301	M.F.RESISTOR	3.30K 1/10W
R55	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R56	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R57	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R58	NRSA02J-393	M.G.RESISTOR	39K 1/10W
R61	NRSA02J-101	M.G.RESISTOR	100 1/10W
R62	NRSA02J-101	M.G.RESISTOR	100 1/10W
R63	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R64	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R65	NRSA02J-221	M.G.RESISTOR	220 1/10W
R66	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R67	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W

[PRI]

Symbol No.	Part No.	Part Name	Description
R68	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R69	NRVA02D-3302	M.F.RESISTOR	33.0K 1/10W
R70	NRVA02D-1802	M.F.RESISTOR	18.0K 1/10W
R74	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R75	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R76	NRSA02J-101	M.G.RESISTOR	100 1/10W
R77	NRSA02J-122	M.G.RESISTOR	1.2K 1/10W
R78	NRSA02J-182	M.G.RESISTOR	1.8K 1/10W
R79	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R80	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R81	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R82	NRSA02J-471	M.G.RESISTOR	470 1/10W
R83	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R84	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R85	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R86	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R87	NRSA02J-105	M.G.RESISTOR	1.0M 1/10W
R89	NRVA02D-3301	M.F.RESISTOR	3.30K 1/10W
R90	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R91	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R92	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R93	NRSA02J-393	M.G.RESISTOR	39K 1/10W
R94	NRSA02J-101	M.G.RESISTOR	100 1/10W
R95	NRSA02J-101	M.G.RESISTOR	100 1/10W
R96	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R97	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R98	NRSA02J-221	M.G.RESISTOR	220 1/10W
R99	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R100	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R101	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R102	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R103	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R104	NRSA02J-101	M.G.RESISTOR	100 1/10W
R105	NRVA02D-3302	M.F.RESISTOR	33.0K 1/10W
R106	NRVA02D-1802	M.F.RESISTOR	18.0K 1/10W
R127	NRSA02J-101	M.G.RESISTOR	100 1/10W
R128	NRSA02J-101	M.G.RESISTOR	100 1/10W
R129	NRSA02J-101	M.G.RESISTOR	100 1/10W
R130	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R131	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R132	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R133	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R134	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R135	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R136	NRSA02J-101	M.G.RESISTOR	100 1/10W
R137	NRSA02J-561	M.G.RESISTOR	560 1/10W
R138	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R139	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R140	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R141	NRSA02J-122	M.G.RESISTOR	1.2K 1/10W
R143	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R144	NRSA02J-101	M.G.RESISTOR	100 1/10W
R145	NRSA02J-561	M.G.RESISTOR	560 1/10W
R146	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R147	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R148	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R149	NRSA02J-122	M.G.RESISTOR	1.2K 1/10W
R151	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R152	NRSA02J-101	M.G.RESISTOR	100 1/10W
R153	NRSA02J-101	M.G.RESISTOR	100 1/10W

Symbol No.	Part No.	Part Name	Description
R154	NRSA02J-101	M.G.RESISTOR	100 1/10W
R155	NRSA02J-101	M.G.RESISTOR	100 1/10W
R156	NRSA02J-101	M.G.RESISTOR	100 1/10W
R157	NRSA02J-101	M.G.RESISTOR	100 1/10W
R158	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R159	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R160	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R161	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R162	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R163	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R164	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R165	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R168	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R169	NRSA02J-471	M.G.RESISTOR	470 1/10W
R170	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R171	NRSA02J-100	M.G.RESISTOR	10 1/10W
R172	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R173	NRSA02J-471	M.G.RESISTOR	470 1/10W
R174	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R175	NRSA02J-100	M.G.RESISTOR	10 1/10W
R176	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R177	NRSA02J-471	M.G.RESISTOR	470 1/10W
R178	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R179	NRSA02J-100	M.G.RESISTOR	10 1/10W
R180	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R181	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R182	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R183	NRSA02J-221	M.G.RESISTOR	220 1/10W
R184	NRSA02J-221	M.G.RESISTOR	220 1/10W
R185	NRSA02J-221	M.G.RESISTOR	220 1/10W
R186	NRSA02J-682	M.G.RESISTOR	6.8K 1/10W
R187	NRSA02J-221	M.G.RESISTOR	220 1/10W
R188	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R189	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R190	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R191	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R192	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R193	NRSA02J-101	M.G.RESISTOR	100 1/10W
R194	NRSA02J-101	M.G.RESISTOR	100 1/10W
R195	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R196	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
VR1	NVP1416-103	TRIM.RESISTOR	10K B IN GAIN
VR2	NVP1416-502	TRIM.RESISTOR	5K G IN GAIN
VR3	NVP1416-502	TRIM.RESISTOR	5K R IN GAIN
VR4	NVP1416-502	TRIM.RESISTOR	5K B HI GAIN
VR5	NVP1416-502	TRIM.RESISTOR	5K G HI GAIN
VR6	NVP1416-502	TRIM.RESISTOR	5K R HI GAIN
VR11	NVP1416-503	TRIM.RESISTOR	50K B DC BAL
VR12	NVP1416-503	TRIM.RESISTOR	50K G DC BAL
VR13	NVP1416-503	TRIM.RESISTOR	50K R DC BAL
C1	NEA10JM-337	E.CAPACITOR	330 6.3V
C2	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C3	NEA10JM-337	E.CAPACITOR	330 6.3V
C4	NEA10JM-337	E.CAPACITOR	330 6.3V
C5	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C6	NEA10JM-107	E.CAPACITOR	100 6.3V
C7	NCF21EZ-104	CER.CAPACITOR	0.10 25V

Symbol No.	Part No.	Part Name	Description	
C8	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C9	NCT03CH-390	CER.CAPACITOR	39P	50V
C10	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C11	NCT03CH-100	CER.CAPACITOR	10P	50V
C12	NCT03CH-470	CER.CAPACITOR	47P	50V
C13	NEN11HM-105	E.CAPACITOR	1.0	50V
C14	NEN11HM-105	E.CAPACITOR	1.0	50V
C15	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C16	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C17	NCT03CH-4R0	CER.CAPACITOR	4.0P	50V
C18	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C19	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C20	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C21	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C22	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C23	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C24	NEA10JM-107	E.CAPACITOR	100	6.3V
C25	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C26	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C27	NCT03CH-390	CER.CAPACITOR	39P	50V
C28	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C30	NCT03CH-470	CER.CAPACITOR	47P	50V
C31	NEN11HM-105	E.CAPACITOR	1.0	50V
C32	NEN11HM-105	E.CAPACITOR	1.0	50V
C33	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C34	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C35	NCT03CH-4R0	CER.CAPACITOR	4.0P	50V
C36	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C37	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C38	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C39	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C40	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C42	NEA10JM-107	E.CAPACITOR	100	6.3V
C43	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C44	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C45	NCT03CH-390	CER.CAPACITOR	39P	50V
C46	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C47	NCT03CH-220	CER.CAPACITOR	22P	50V
C48	NCT03CH-470	CER.CAPACITOR	47P	50V
C49	NEN11HM-105	E.CAPACITOR	1.0	50V
C50	NEN11HM-105	E.CAPACITOR	1.0	50V
C51	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C52	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C53	NCT03CH-4R0	CER.CAPACITOR	4.0P	50V
C54	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C55	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C56	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C57	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C58	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C59	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C70	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C71	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C72	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C73	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C74	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C76	NEA10JM-107	E.CAPACITOR	100	6.3V
C77	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C78	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C79	NCF21EZ-104	CER.CAPACITOR	0.10	25V

Symbol No.	Part No.	Part Name	Description	
C80	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C81	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C82	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C83	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C84	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C85	NEA11AM-336	E.CAPACITOR	33	10V
C86	NEA11AM-336	E.CAPACITOR	33	10V
C87	NEA11AM-336	E.CAPACITOR	33	10V
C89	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C90	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C91	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C92	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C93	NEF11AM-475	TAN.CAPACITOR	4.7	10V
C94	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C95	NEF11AM-475	TAN.CAPACITOR	4.7	10V
C96	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C97	NEF11AM-475	TAN.CAPACITOR	4.7	10V
C101	NEF11CM-106	TAN.CAPACITOR	10	16V
C102	NEF11CM-106	TAN.CAPACITOR	10	16V
C103	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C104	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C105	NCF21HZ-103	CER.CAPACITOR	0.010	50V
C106	NCT03CH-2R0	CER.CAPACITOR	2.0P	50V
C108	NEF11AM-156	TAN.CAPACITOR	15	10V
C109	NEF11AM-156	TAN.CAPACITOR	15	10V
C110	NCF21EZ-104	CER.CAPACITOR	0.10	25V
C111	NCF21EZ-104	CER.CAPACITOR	0.10	25V
VC5	NAT3112-200RZ	TRIM.CAPACITOR	20P	B TRAP
VC6	NAT3112-200RZ	TRIM.CAPACITOR	20P	G TRAP
VC7	NAT3112-200RZ	TRIM.CAPACITOR	20P	R TRAP
L1	SSV1330-150	COIL	15 μ H	
L2	SSV1330-150	COIL	15 μ H	
L3	SCV1950-120	PEAKING COIL	12 μ H	
L4	SCV1950-120	PEAKING COIL	12 μ H	
L5	SCV1950-120	PEAKING COIL	12 μ H	
DL1	SCV1253-001	DELAY LINE	140 nSEC	
DL2	SCV1253-001	DELAY LINE	140 nSEC	
CN1	SCV0501-001	CONNECTOR	30 PIN	
CN36	SCV1848-016	CONNECTOR	16 PIN	
CN37	SCV1848-030	CONNECTOR	30 PIN	
CN50	SCV1770-003	CONNECTOR	3 PIN	
TP1	SCV1880-001	TEST POINT		
TP2	SCV1880-001	TEST POINT		
TP3	SCV1880-001	TEST POINT		
TP4	SCV1880-001	TEST POINT		

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<SCK2307-01-00B>

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Symbol No.	Part No.	Part Name	Description
IC1	JCS0003	I.C.(DIGI-MOS)	JVC
IC2	JCS0003	I.C.(DIGI-MOS)	JVC
IC3	JCS0003	I.C.(DIGI-MOS)	JVC
IC4	RC064M	I.C.(MONO-ANA)	JRC
IC5	RC064M	I.C.(MONO-ANA)	JRC
IC6	RC064M	I.C.(MONO-ANA)	JRC
IC7	RC064M	I.C.(MONO-ANA)	JRC
IC8	NJM062M	I.C.(M)	JRC
IC9	NJM062M	I.C.(M)	JRC
IC10	NJM062M	I.C.(M)	JRC
IC11	NJM062M	I.C.(M)	JRC
IC12	RC064M	I.C.(MONO-ANA)	JRC
IC13	TC4S69F	I.C.(M)	TOSHIBA
IC14	TC4S69F	I.C.(M)	TOSHIBA
IC15	NJM062M	I.C.(M)	JRC
IC16	TC4S69F	I.C.(M)	TOSHIBA
IC17	SCV1360-001	I.C.(H)	JVC
IC18	SCV1360-001	I.C.(H)	JVC
Q1	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q2	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q3	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q4	2SK662(QR)	FET	MATSUSHITA
Q5	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q6	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q7	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q8	2SK662(QR)	FET	MATSUSHITA
Q9	2SB1219(QR)	TRANSISTOR	MATSUSHITA
Q10	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q11	2SD1820(QR)	TRANSISTOR	MATSUSHITA
Q12	2SK662(QR)	FET	MATSUSHITA
Q19	DTC124EU	TRANSISTOR	ROHM
Q20	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q21	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q22	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q23	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q24	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q25	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q26	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q27	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q28	DTC124EU	TRANSISTOR	ROHM
Q29	DTA124EU	D.TRANSISTER	ROHM
Q30	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q31	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q32	DTC124EU	TRANSISTOR	ROHM
Q33	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q34	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q35	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q36	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q37	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q38	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q40	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q41	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q42	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
Q43	2SA1532(BC)	SI.TRANSISTOR	MATSUSHITA
D1	MA142A	DIODE	MATSUSHITA
D2	MA142A	DIODE	MATSUSHITA

Symbol No.	Part No.	Part Name	Description
R1	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R2	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R3	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R4	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R5	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R6	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R7	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R8	NRSA02J-151	M.G.RESISTOR	150 1/10W
R9	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R10	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R11	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R12	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R13	NRSA02J-101	M.G.RESISTOR	100 1/10W
R14	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R15	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R16	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R17	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R18	NRSA02J-101	M.G.RESISTOR	100 1/10W
R19	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R20	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R21	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R22	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R23	NRSA02J-101	M.G.RESISTOR	100 1/10W
R24	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R25	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R26	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R27	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R28	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R29	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R30	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R31	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R32	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R33	NRSA02J-151	M.G.RESISTOR	150 1/10W
R34	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R35	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R36	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R37	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R38	NRSA02J-101	M.G.RESISTOR	100 1/10W
R39	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R42	NRSA02J-101	M.G.RESISTOR	100 1/10W
R43	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R44	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R45	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R46	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R47	NRSA02J-101	M.G.RESISTOR	100 1/10W
R48	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R49	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R50	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R51	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R52	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R53	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R54	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R55	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R56	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R57	NRSA02J-151	M.G.RESISTOR	150 1/10W
R58	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R59	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R60	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R61	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R62	NRSA02J-101	M.G.RESISTOR	100 1/10W

Symbol No.	Part No.	Part Name	Description
R63	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R64	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R65	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R66	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R67	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R68	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R69	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R70	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R71	NRSA02J-101	M.G.RESISTOR	100 1/10W
R72	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R73	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R86	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R87	NRSA02J-821	M.G.RESISTOR	820 1/10W
R88	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R89	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R90	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R91	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R92	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R93	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R94	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R95	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R96	NRSA02J-683	M.G.RESISTOR	68K 1/10W
R97	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R98	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R99	NRSA02J-823	M.G.RESISTOR	82K 1/10W
R100	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R101	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R102	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R103	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R104	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R105	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R106	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R107	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R108	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R111	NRSA02J-683	M.G.RESISTOR	68K 1/10W
R112	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R113	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R114	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R115	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R116	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R117	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R118	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R119	NRSA02J-683	M.G.RESISTOR	68K 1/10W
R120	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R121	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R122	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R123	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R124	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R125	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R128	NRSA02J-683	M.G.RESISTOR	68K 1/10W
R129	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R130	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R131	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R132	NRSA02J-564	M.G.RESISTOR	560K 1/10W
R133	NRSA02J-564	M.G.RESISTOR	560K 1/10W
R134	NRSA02J-684	M.G.RESISTOR	680K 1/10W
R135	NRSA02J-124	M.G.RESISTOR	120K 1/10W
R136	NRSA02J-224	M.G.RESISTOR	220K 1/10W
R137	NRSA02J-683	M.G.RESISTOR	68K 1/10W
R138	NRSA02J-104	M.G.RESISTOR	100K 1/10W

Symbol No.	Part No.	Part Name	Description
R139	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R140	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R141	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R142	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R143	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R144	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R145	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R146	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R147	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R148	NRSA02J-472	M.G.RESISTOR	4.7K 1/10W
R149	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R150	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R151	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R152	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R153	NRSA02J-273	M.G.RESISTOR	27K 1/10W
R154	NRSA02J-221	M.G.RESISTOR	220 1/10W
R155	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R156	NRSA02J-223	M.G.RESISTOR	22K 1/10W
R157	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R158	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R159	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R160	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R162	NRSA02J-563	M.G.RESISTOR	56K 1/10W
R163	NRSA02J-563	M.G.RESISTOR	56K 1/10W
R164	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R165	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R166	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R167	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R168	NRSA02J-0R0	M.G.RESISTOR	0 1/10W
R172	NRSA02J-103	M.G.RESISTOR	10K 1/10W
R173	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R174	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R177	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R178	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R179	NRSA02J-392	M.G.RESISTOR	3.9K 1/10W
R180	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R181	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R182	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R183	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R184	NRSA02J-183	M.G.RESISTOR	18K 1/10W
R185	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R190	NRSA02J-153	M.G.RESISTOR	15K 1/10W
R191	NRSA02J-562	M.G.RESISTOR	5.6K 1/10W
R192	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R193	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R194	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R195	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R196	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R197	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R198	NRSA02J-102	M.G.RESISTOR	1.0K 1/10W
R199	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R200	NRSA02J-333	M.G.RESISTOR	33K 1/10W
R201	NRSA02J-123	M.G.RESISTOR	12K 1/10W
R202	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R203	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R204	NRSA02J-222	M.G.RESISTOR	2.2K 1/10W
R205	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R206	NRSA02J-332	M.G.RESISTOR	3.3K 1/10W
R207	NRSA02J-104	M.G.RESISTOR	100K 1/10W
R208	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W

[PR2]

Symbol No.	Part No.	Part Name	Description
R209	NRSA02J-272	M.G.RESISTOR	2.7K 1/10W
R210	NRSA02J-561	M.G.RESISTOR	560 1/10W
R211	NRSA02J-561	M.G.RESISTOR	560 1/10W
R212	NRSA02J-101	M.G.RESISTOR	100 1/10W
R213	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R214	NRSA02J-823	M.G.RESISTOR	82K 1/10W
R215	NRSA02J-473	M.G.RESISTOR	47K 1/10W
R216	NRSA02J-823	M.G.RESISTOR	82K 1/10W
VR1	NVP1416-102	TRIM.RESISTOR	1K B OUT GAIN
VR2	NVP1416-102	TRIM.RESISTOR	1K R OUT GAIN
VR3	NVP1416-103	TRIM.RESISTOR	10K B GAMMA
VR4	NVP1416-103	TRIM.RESISTOR	10K G GAMMA
VR5	NVP1416-103	TRIM.RESISTOR	10K R GAMMA
VR6	NVP1416-103	TRIM.RESISTOR	10K B KNEE
VR7	NVP1416-103	TRIM.RESISTOR	10K B BLACK
VR8	NVP1416-103	TRIM.RESISTOR	10K G KNEE
VR9	NVP1416-103	TRIM.RESISTOR	10K G BLACK
VR10	NVP1416-103	TRIM.RESISTOR	10K R KNEE
VR11	NVP1416-103	TRIM.RESISTOR	10K R BLACK
VR13	NVP1416-103	TRIM.RESISTOR	10K B FLARE
VR14	NVP1416-103	TRIM.RESISTOR	10K G FLARE
VR15	NVP1416-103	TRIM.RESISTOR	10K R FLARE
VR16	NVP1416-502	TRIM.RESISTOR	5K B W.CLIP
VR17	NVP1416-502	TRIM.RESISTOR	5K G W.CLIP
VR18	NVP1416-502	TRIM.RESISTOR	5K R W.CLIP
VR30	NVP1415-202	TRIM.RESISTOR	2K B+(B-G)
VR31	NVP1415-202	TRIM.RESISTOR	2K G+(B-G)
VR32	NVP1415-102	V.RESISTOR	1K G+(G-R)
VR33	NVP1415-102	V.RESISTOR	1K R+(R-G)
VR34	NVP1415-202	TRIM.RESISTOR	2K R+(G-R)+(G-R)
C1	NEA10JM-337	E.CAPACITOR	330 6.3V
C2	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C3	NEA10JM-337	E.CAPACITOR	330 6.3V
C4	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C5	NCB21HK-333	CER.CAPACITOR	0.033 50V
C7	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C8	NEA10JM-107	E.CAPACITOR	100 6.3V
C9	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C10	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C11	NEA10JM-107	E.CAPACITOR	100 6.3V
C12	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C13	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C14	NCB21HK-333	CER.CAPACITOR	0.033 50V
C15	NCB21HK-333	CER.CAPACITOR	0.033 50V
C16	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C17	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C18	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C19	NEN11AM-106	E.CAPACITOR	10 10V
C20	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C21	NEN11HM-105	E.CAPACITOR	1.0 50V
C22	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C23	NEN11HM-105	E.CAPACITOR	1.0 50V
C24	NCT03CH-470	CER.CAPACITOR	47P 50V
C25	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C26	NEA10JM-107	E.CAPACITOR	100 6.3V
C27	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C28	NEA10JM-107	E.CAPACITOR	100 6.3V

Symbol No.	Part No.	Part Name	Description
C29	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C30	NCT03CH-821	CER.CAPACITOR	820P 50V
C31	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C32	NCB21HK-333	CER.CAPACITOR	0.033 50V
C34	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C35	NEA10JM-107	E.CAPACITOR	100 6.3V
C36	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C37	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C38	NEA10JM-107	E.CAPACITOR	100 6.3V
C39	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C40	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C41	NCB21HK-333	CER.CAPACITOR	0.033 50V
C42	NCB21HK-333	CER.CAPACITOR	0.033 50V
C43	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C44	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C45	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C46	NEN11AM-106	E.CAPACITOR	10 10V
C47	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C48	NEN11HM-105	E.CAPACITOR	1.0 50V
C49	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C50	NEN11HM-105	E.CAPACITOR	1.0 50V
C51	NCT03CH-470	CER.CAPACITOR	47P 50V
C52	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C53	NEA10JM-107	E.CAPACITOR	100 6.3V
C54	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C55	NEA10JM-107	E.CAPACITOR	100 6.3V
C56	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C57	NCT03CH-821	CER.CAPACITOR	820P 50V
C58	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C59	NCB21HK-333	CER.CAPACITOR	0.033 50V
C61	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C62	NEA10JM-107	E.CAPACITOR	100 6.3V
C63	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C64	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C65	NEA10JM-107	E.CAPACITOR	100 6.3V
C66	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C67	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C68	NCB21HK-333	CER.CAPACITOR	0.033 50V
C69	NCB21HK-333	CER.CAPACITOR	0.033 50V
C70	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C71	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C72	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C73	NEN11AM-106	E.CAPACITOR	10 10V
C75	NEN11HM-105	E.CAPACITOR	1.0 50V
C76	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C77	NEN11HM-105	E.CAPACITOR	1.0 50V
C78	NCT03CH-470	CER.CAPACITOR	47P 50V
C79	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C80	NEA10JM-107	E.CAPACITOR	100 6.3V
C81	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C82	NEA10JM-107	E.CAPACITOR	100 6.3V
C83	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C84	NCT03CH-821	CER.CAPACITOR	820P 50V
C85	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C90	NEA11AM-336	E.CAPACITOR	33 10V
C91	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C92	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C93	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C94	NEN11AM-106	E.CAPACITOR	10 10V

7.9 CP1 board assembly list

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Symbol No.	Part No.	Part Name	Description
C95	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C96	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C97	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C98	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C99	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C100	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C101	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C102	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C103	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C104	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C105	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C106	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C107	NEA11AM-336	E.CAPACITOR	33 10V
C108	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C109	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C110	NEF11DM-684	TAN.CAPACITOR	0.68 20V
C111	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C112	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C113	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C114	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C115	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C116	NEA11AM-336	E.CAPACITOR	33 10V
C117	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C118	NEN11AM-106	E.CAPACITOR	10 10V
C119	NCT03CH-560	CER.CAPACITOR	56P 50V
C120	NCT03CH-560	CER.CAPACITOR	56P 50V
C121	NCT03CH-560	CER.CAPACITOR	56P 50V
C122	NCT03CH-100	CER.CAPACITOR	10P 50V
C130	NEF11CM-106	TAN.CAPACITOR	10 16V
C131	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C132	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C133	NEF11CM-105	TAN.CAPACITOR	1.0 16V
L1	SSV1330-150	COIL	15 μ H
L2	SSV1330-150	COIL	15 μ H
L3	SCV1950-221	PEAKING COIL	220 μ H
L4	SCV1950-221	PEAKING COIL	220 μ H
L5	SCV1950-221	PEAKING COIL	220 μ H
S1	QSRAA12-S01	ROTARY SWITCH	MATRIX ON/OFF
S2	QSRAA12-S01	ROTARY SWITCH	GAMMA ON/OFF
CN37	SCV1849-030	CONNECTOR	30 PIN
CN50	SCV1770-003	CONNECTOR	3 PIN
TP1	SCV1880-001	TEST POINT	
TP2	SCV1880-001	TEST POINT	
TP3	SCV1880-001	TEST POINT	
TP4	SCV1880-001	TEST POINT	
TP5	SCV1880-001	TEST POINT	
TP6	SCV1880-001	TEST POINT	
TP7	SCV1880-001	TEST POINT	
TP8	SCV1880-001	TEST POINT	
TP9	SCV1880-001	TEST POINT	

Symbol No.	Part No.	Part Name	Description
IC1	MB89T715APF	I.C(MICRO-PROC)	FUJITSU
IC2	PLSC1081-V1-00	I.C(EP-ROM)	MBM27C512-20CZ
IC3	LH5116NA-10	I.C(S-RAM)	SHARP
IC4	MB89251APF	I.C(DIGI-MOS)	FUJITSU
IC5	MC74HC373AF	I.C(DIGI-MOS)	MOTOROLA
IC6	MC74HC139AF	I.C(DIGI-MOS)	MOTOROLA
IC7	MB89012-109	I.C(DIGI-MOS)	FUJITSU
IC8	MC74HC367F	I.C(DIGI-MOS)	MOTOROLA
IC9	JCS0005	I.C(DIGI-MOS)	JVC
IC10	S-2914AIF10	EE P ROM	
IC11	MC74HC04AF	I.C(DIGI-MOS)	MOTOROLA
IC13	MB88342PF	I.C.(M)	FUJITSU
IC14	NJM062M	I.C.(M)	JRC
IC15	MC14053BF	I.C(DIGI-MOS)	MOTOROLA
IC16	NJM062M	I.C.(M)	JRC
IC17	NJM062M	I.C.(M)	JRC
IC18	NJM062M	I.C.(M)	JRC
IC19	MC14052BF	I.C(DIGI-MOS)	MOTOROLA
IC20	NJM062M	I.C.(M)	JRC
IC21	MC74HC74AF	I.C(DIGI-MOS)	MOTOROLA
IC22	S-8054HNCB	I.C.(M)	SEIKO
IC23	TC4066BF	I.C.(M)	TOSHIBA
IC24	TC7S00F	I.C.(DIGI-MOS)	TOSHIBA
IC28	MC74HC138AF	I.C(DIGI-MOS)	MOTOROLA
IC29	MC74HC04AF	I.C(DIGI-MOS)	MOTOROLA
IC31	TC4S66F	I.C.(M)	TOSHIBA
IC32	TC7S08F	I.C(DIGI-MOS)	TOSHIBA
Q3	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q4	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q5	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q6	2SA1532(BC)	SI TRANSISTOR	MATSUSHITA
Q7	2SC3930(BC)	TRANSISTOR	MATSUSHITA
Q8	DTC124EU	TRANSISTOR	ROHM
Q9	2SB766(QR)	TRANSISTOR	MATSUSHITA
Q10	2SC3930(BC)	TRANSISTOR	MATSUSHITA
D3	MA143A	SI DIODE	MATSUSHITA
D4	MA335	SI DIODE	MATSUSHITA
D5	MA142A	DIODE	MATSUSHITA
D6	MA142A	DIODE	MATSUSHITA
D7	MA143A	SI DIODE	MATSUSHITA
D8	MA143A	SI DIODE	MATSUSHITA
D9	MA142A	DIODE	MATSUSHITA
D10	MA142A	DIODE	MATSUSHITA
D11	MA143A	SI DIODE	MATSUSHITA
D12	MA143A	SI DIODE	MATSUSHITA
D13	MA142A	DIODE	MATSUSHITA
D14	MA142A	DIODE	MATSUSHITA
D15	MA143A	SI DIODE	MATSUSHITA
D18	MA143A	SI DIODE	MATSUSHITA
R1	NRVA02D-1001	M.F.RESISTOR	1.00K 1/10W
R2	NRVA02D-4702	M.F.RESISTOR	47.0K 1/10W
R3	NRVA02D-1000	M.F.RESISTOR	100 1/10W
R5	NRVA02D-1001	M.F.RESISTOR	1.00K 1/10W
R6	NRVA02D-1003	M.F.RESISTOR	100K 1/10W
R7	NRVA02D-1001	M.F.RESISTOR	1.00K 1/10W
R8	NRVA02D-1003	M.F.RESISTOR	100K 1/10W

[CP1]

Symbol No.	Part No.	Part Name	Description	
R9	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R12	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R13	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R14	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R15	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R16	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R17	NRVA02D-4701	M.F.RESISTOR	4.70K	1/10W
R18	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R19	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R20	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R21	NRSA02J-0R0	M.G.RESISTOR	0	1/10W
R23	NRVA02D-3903	M.F.RESISTOR	390K	1/10W
R24	NRVA02D-1203	M.F.RESISTOR	120K	1/10W
R25	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R26	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R27	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R28	NRVA02D-22R0	M.F.RESISTOR	22.0	1/10W
R29	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R30	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R32	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R33	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R34	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R35	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R36	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R37	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R38	NRVA02D-2201	M.F.RESISTOR	2.20K	1/10W
R39	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R40	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R41	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R42	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R43	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R44	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R45	NRVA02D-3301	M.F.RESISTOR	3.30K	1/10W
R46	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R47	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R49	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R50	NRVA02D-1202	M.F.RESISTOR	12.0K	1/10W
R51	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R52	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R53	NRVA02D-1202	M.F.RESISTOR	12.0K	1/10W
R54	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R55	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R56	NRVA02D-2203	M.F.RESISTOR	220K	1/10W
R57	NRVA02D-1202	M.F.RESISTOR	12.0K	1/10W
R58	NRVA02D-3303	M.F.RESISTOR	330K	1/10W
R59	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R61	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R62	NRVA02D-6802	M.F.RESISTOR	68.0K	1/10W
R63	NRVA02D-2703	M.F.RESISTOR	270K	1/10W
R64	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R65	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R66	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R67	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R68	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R69	NRVA02D-1502	M.F.RESISTOR	15.0K	1/10W
R70	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R71	NRVA02D-4702	M.F.RESISTOR	47.0K	1/10W
R72	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R73	NRVA02D-4701	M.F.RESISTOR	4.70K	1/10W

Symbol No.	Part No.	Part Name	Description	
R74	NRVA02D-6801	M.F.RESISTOR	6.80K	1/10W
R75	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R76	NRVA02D-1802	M.F.RESISTOR	18.0K	1/10W
R77	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R78	NRVA02D-1802	M.F.RESISTOR	18.0K	1/10W
R79	NRVA02D-3302	M.F.RESISTOR	33.0K	1/10W
R80	NRVA02D-6802	M.F.RESISTOR	68.0K	1/10W
R81	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R82	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R83	NRVA02D-4703	M.F.RESISTOR	470K	1/10W
R84	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R85	NRVA02D-1001	M.F.RESISTOR	1.00K	1/10W
R87	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R88	NRVA02D-2702	M.F.RESISTOR	27.0K	1/10W
R89	NRVA02D-3901	M.F.RESISTOR	3.90K	1/10W
R90	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R91	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R92	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R93	NRVA02D-1801	M.F.RESISTOR	1.80K	1/10W
R94	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R95	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R96	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R97	NRVA02D-1502	M.F.RESISTOR	15.0K	1/10W
R98	NRVA02D-4701	M.F.RESISTOR	4.70K	1/10W
R99	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R100	NRVA02D-2201	M.F.RESISTOR	2.20K	1/10W
R101	NRVA02D-1500	M.F.RESISTOR	150	1/10W
R102	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R103	NRSA02J-0R0	M.G.RESISTOR	0	1/10W
R104	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R105	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R106	NRVA02D-22R0	M.F.RESISTOR	22.0	1/10W
R107	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R108	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R109	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R110	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R111	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R112	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
R113	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R114	NRVA02D-4702	M.F.RESISTOR	47.0K	1/10W
R115	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R116	NRVA02D-2702	M.F.RESISTOR	27.0K	1/10W
R117	NRVA02D-1802	M.F.RESISTOR	18.0K	1/10W
R118	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R119	NRVA02D-4700	M.F.RESISTOR	470	1/10W
R120	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R121	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R122	NRVA02D-1000	M.F.RESISTOR	100	1/10W
R123	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R124	NRVA02D-2202	M.F.RESISTOR	22.0K	1/10W
R125	NRVA02D-4701	M.F.RESISTOR	4.70K	1/10W
R126	NRVA02D-1002	M.F.RESISTOR	10.0K	1/10W
R127	NRVA02D-1003	M.F.RESISTOR	100K	1/10W
VR1	NVP1415-502	TRIM.RESISTOR	5K	B-G
VR2	NVP1415-502	TRIM.RESISTOR	5K	R-G
VR3	NVP1415-503	TRIM.RESISTOR	50K	NAM LEVEL
VR5	NVP1415-104	TRIM.RESISTOR	100K	A/D OFFSET
VR7	NVP1415-503	TRIM.RESISTOR	50K	Eoo

Symbol No.	Part No.	Part Name	Description
C1	NCB21EK-473	CER.CAPACITOR	0.047 25V
C2	NCB21HK-562	CER.CAPACITOR	5600P 50V
C3	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C5	NCT03CH-820	CER.CAPACITOR	82P 50V
C7	NCT03CH-150	CER.CAPACITOR	15P 50V
C8	NCB21EK-473	CER.CAPACITOR	0.047 25V
C9	NCT03CH-821	CER.CAPACITOR	820P 50V
C10	NCB21EK-473	CER.CAPACITOR	0.047 25V
C11	NCT03CH-181	CER.CAPACITOR	180P 50V
C12	NCT03CH-151	CER.CAPACITOR	150P 50V
C14	NCB21EK-473	CER.CAPACITOR	0.047 25V
C15	NCB21EK-473	CER.CAPACITOR	0.047 25V
C16	NCB21EK-473	CER.CAPACITOR	0.047 25V
C17	NCB21EK-473	CER.CAPACITOR	0.047 25V
C18	NEF11AM-156	TAN.CAPACITOR	15 10V
C19	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C20	NCB21EK-473	CER.CAPACITOR	0.047 25V
C21	NCB21EK-473	CER.CAPACITOR	0.047 25V
C22	NCB21EK-473	CER.CAPACITOR	0.047 25V
C23	NCB21EK-473	CER.CAPACITOR	0.047 25V
C24	NCB21EK-473	CER.CAPACITOR	0.047 25V
C25	NCB21EK-473	CER.CAPACITOR	0.047 25V
C26	NCB21EK-473	CER.CAPACITOR	0.047 25V
C27	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C28	NCB21EK-473	CER.CAPACITOR	0.047 25V
C29	NCB21EK-473	CER.CAPACITOR	0.047 25V
C31	NCB21EK-393	CER.CAPACITOR	0.039 25V
C33	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C34	NEN11HM-105	E.CAPACITOR	1.0 50V
C35	NCT03CH-150	CER.CAPACITOR	15P 50V
C36	NCB21EK-473	CER.CAPACITOR	0.047 25V
C37	NEF11AM-475	TAN.CAPACITOR	4.7 10V
C38	NEF11CM-105	TAN.CAPACITOR	1.0 16V
C39	NCF21EZ-104	CER.CAPACITOR	0.10 25V
C40	NCB21EK-473	CER.CAPACITOR	0.047 25V
C41	NEA11EM-106	E.CAPACITOR	10 25V
C42	NCB21EK-473	CER.CAPACITOR	0.047 25V
C43	NEA11CM-476	E.CAPACITOR	47 16V
C44	NEA10JM-107	E.CAPACITOR	100 6.3V
C45	NEA10JM-107	E.CAPACITOR	100 6.3V
C46	NEA10JM-107	E.CAPACITOR	100 6.3V
C47	NEN11HM-105	E.CAPACITOR	1.0 50V
C52	NCB21EK-473	CER.CAPACITOR	0.047 25V
C53	QEZ0171-224	E.CAPACITOR	0.22
C54	NCB21EK-473	CER.CAPACITOR	0.047 25V
C56	NCT03CH-221	CER.CAPACITOR	220P 50V
C57	NFV11EJ-104	MYLAR CAPACITOR	0.10 25V
C58	NEF11AM-156	TAN.CAPACITOR	15 10V
C59	NFV11EJ-104	MYLAR CAPACITOR	0.10 25V
C60	NEF11EM-475	TAN.CAPACITOR	4.7 25V
C61	NCF21EZ-104	CER.CAPACITOR	0.10 25V
L1	SSV1330-150	COIL	15 μ H
L2	SSV1330-150	COIL	15 μ H
L3	SCV1950-220	PEAKING COIL	22 μ H
L4	SCV1950-4R7	PEAKING COIL	4.7 μ H
X1	SCV2029-001	CRYSTAL	7.373 MHz

Symbol No.	Part No.	Part Name	Description
S1	SCV2247-004	SWITCH	CHECK
CN18	SCV1770-009	CONNECTOR	9 PIN
CN27	SSV1321-020	CONNECTOR	20 PIN
CN28	SSV1321-020	CONNECTOR	20 PIN
CN43	SCV1770-004	CONNECTOR	4 PIN
CN44	SCV1814-008	CONNECTOR	8 PIN
CN45	SCV1814-008	CONNECTOR	8 PIN
CN46	SCV1814-008	CONNECTOR	8 PIN
CN47	SCV1814-008	CONNECTOR	8 PIN